

**Assessment of agricultural information needs in
African, Caribbean and Pacific (ACP) States for
CTA's Products & Services**

Phase 1: Pacific

Country study: Cook Islands

Final Report

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on behalf of the

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Executive Summary

Introduction

The current study was initiated and funded by CTA at the request of various national and regional partners with whom CTA has had a long-standing relationship in order to provide more targeted assistance to their beneficiaries. In this respect, the study was undertaken to assess the agricultural information needs in the Cook Islands. After presenting a country profile, the study goes on to cover information and capacity building needs, and identifying specific areas for possible collaboration with CTA.

Objectives of the study

The objectives of the study as contained in the terms of reference are as follows:

- i. to identify agricultural information needs of key actors / beneficiaries for CTA products and services;
- ii. to identify needs of potential actors / beneficiaries of CTA activities and services in terms of building capacity for information and communication management;
- iii. to identify potential partners / beneficiaries for CTA activities and services;
- iv. to develop some baseline data to facilitate subsequent monitoring activities.

Methodology

Data for the study was collected in two ways:

- desk review of available literature and information sources including the findings of programme evaluations; and
- the conduct of face-to-face interviews with relevant stakeholders/concerned parties.

Expected result

The expected result was one main report not exceeding 20 pages according to the format provided.

Findings

Although the contribution by agriculture to the economy in terms of GDP has fallen over the years from 66% in 1970 to an estimated 15% in 2003 due to the development and expansion of the non-agriculture sector (mainly tourism, pearl farming, banking and off-shore finance), its significance has in fact not abated. Seventy six percent are still involved in agricultural activities, be it subsistence, semi-subsistence or full-time commercial. With this level of involvement, continued assistance even at a higher level to the sector is therefore fully justified. Whereas in the past the country had to export its agricultural products because of the lack of local market capacity, the onslaught of tourism commencing in the late 1980s has created a huge local market which most farmers are now taking advantage of. The 1:6 ratio of local population to tourist inflow means that farmers have a sure market to supply without the hassles of long-distance transport and distribution-related expenditures.

The three key institutions involved in Cook Islands agriculture sector development (Ministry of Agriculture, Ministry of Marine Resources, Rarotonga Nita Growers Association) were contacted to secure information relating to their specific roles and responsibilities, including background information on the status of their information management activities. Useful reference materials were made available which further highlighted the significance of these agencies to the present study. Based on the extent of their involvement over the years, three regional organisations (FAO, SPC/PPS, IRETA), were also identified as key institutions in agriculture sector development in the country, though interviews were not possible. A lot of the data reproduced in this report comes from publications, discussions with officials in the 3 Government agencies referred to above, the author's long association with officials in the above regional organisations, as well as his many years of experience in agriculture and rural development in the country.

The information and communication management capacity in MoA is weak despite it being regarded as a high priority; there is no more information division after it was abolished in 1996 as a result of the country's economic reform. As far as information outlets are concerned, there does not seem to be any deficiency in this area. People are pretty well served by the various means of communication, i.e. TV, radio, newspapers, phone, fax, email. But the capacity of MoA to take full advantage of these means is limited by its budget.

Nevertheless, MoA continues to provide information through its technical staff on crop and livestock production and management. To this end, the 12-months CTA-funded mass media promotion of agricultural activities project has contributed tremendously. Apart from a handful of individuals and progressive farmers who attempt to seek their information from abroad for their own personal use, no other farmer or organisation is involved in collecting and disseminating information on rural development.

Conclusions

The study identified **five** key areas pertaining to current information needs which are;

Pest control/management: information on the types of chemicals to use for different pests and for different crops, rates of application, protective gear, and timing, new chemicals and their advantages over conventional ones. **Markets:** information on markets (outlets, prices, peak/low seasons, supplies, etc.), transport and distribution systems, quarantine or protocol requirements, packaging and presentation of products as dictated by overseas buyers. **Seeds:** improved seeds in terms of high yielding, suitability to local climate, "use-again" frequency, storage methods, alternative sources. **Animal Production & Health:** new breeds to improve animal productivity and meat quality, diseases and their remedy, livestock drugs and their use rates, feed types and application rates, and new housing designs. **Fertilisers:** application rates, intervals of application, slow-release fertilisers, fertiliser types most suited for different crops, organic fertilisers available, and composting.

In terms of capacity building, **three** areas of needs were identified;

Staff training: on-the-job training by an experienced trainer, attachment to a suitable organisation (national library, SPC library in Suva, a suitable library in New Zealand), or through participation in organised training programmes on information systems management and use. **Equipment:** virtually all sorts for a revived information division within MoA (stationery, pens, field boards, folders, tape recorders, book shelves for the library, filing cabinets, data projectors, computers with the latest designer packages, databases). **Strategy:** a clearly defined policy and strategy to give direction and purpose

to activities related to information; there is none in place, partly due to the non-existence of a proper information service in MoA.

Recommendations

The study recommends the following which relates to each of CTA's three operational programmes.

Under INFORMATION PRODUCTS AND SERVICES:

- Resources be secured to enable publication or continuous publication of information
- CTA to continue updating the country, through MoA, concerning its publications list
- Further promotion of CTA's SDI, QAS and CD-ROM programmes could also be undertaken as a lot of these products and services are either not readily available, or the fact that they are available is not widely known.

Under COMMUNICATION CHANNELS AND SERVICES:

- CTA's continued assistance towards intra-regional (within the Pacific) forums (meetings, workshops, study visits) by stakeholders would be much appreciated, in addition to facilitating inter-regional ones (between Pacific and other regions).
- Cook Islands participants in regional events could perhaps be sponsored by CTA, e.g. under its seminar support programme.

Under ICM SKILLS AND SYSTEMS:

- There is an existing gap in this area which needs addressing at the earliest opportunity. It may be useful for CTA to convene a regional workshop to help ministries of agriculture (such as MoA) design appropriate information and communication management policies and strategies.
- Second, recognising the budget and staffing limitations, some training appears necessary to increase the information and communication management capacity of all MoA staff having a public outreach role.
- The significance and popularity of the CTA-funded mass media promotion of agricultural activities project implemented by MoA is such that MoA humbly requests CTA's continued funding under this programme for another 12 months after next October.

1. INTRODUCTION

1.1 Background

1. The tasks of the Technical Centre for Agricultural and Rural Cooperation (CTA) are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of African, Caribbean and Pacific (ACP) countries to produce, acquire, exchange and utilise information in this area. CTA's programmes are organised around three principal activities: (i) providing an increasing range and quantity of information products and services and enhancing awareness of relevant information sources; (ii) supporting the integrated use of appropriate communication channels and intensifying contacts and information exchange (particularly intra-ACP); and (iii) developing ACP capacity to generate and manage agricultural information and to formulate information and communication management (ICM) strategies, including those relevant to science and technology.

2. In January 2002, CTA's Strategic Plan (2001-2005) was implemented and CTA's activities were distributed among three operational programme areas/departments:

- Information Products and Services
- Communication Channels and Services
- Information and Communication Management Skills and Systems

3. These operational departments are supported by Planning Corporate Services (P&CS) which is charged with the methodological underpinning of their work and monitoring the ACP environment in order to identify emerging issues and trends and make proposals for their translation into programmes and activities. This current exercise, therefore, falls within the mandate of P&CS.

4. CTA works primarily through intermediary organisations and partners to promote agriculture and rural development. Through partnerships, CTA hopes to increase the number of ACP organisations capable of generating and managing information and developing their own information and communication management strategies. The identification of appropriate partners is therefore of primordial importance.

5. The "Evaluation of the Implementation of the Mid-Term Plan (1997 – 2000)" emphasised the need for CTA to develop a more pro-active approach and elaborate criteria for decision-making with regard to the choice of partner organisations and beneficiaries. Besides partner identification and selection issues, the observation has also been made that, traditionally, the Pacific and Caribbean regions have not received sufficient attention in CTA's programme and activities. Furthermore, the admission of 6 new Pacific member states under the Cotonou Agreement means not much is known about them, hence the need to develop CTA intervention strategy and provide more targeted assistance. Finally, various national and regional partners with whom CTA has had a long-standing relationship have requested the current study in order to provide more targeted assistance to their beneficiaries.

1.2 Objectives

6. The objectives of the current study are to:

- i. to identify agricultural information needs of key actors / beneficiaries for CTA products and services;

- ii. to identify needs of potential actors / beneficiaries of CTA activities and services in terms of building capacity for information and communication management;
- iii. to identify potential partners / beneficiaries for CTA activities and services;
- iv. to develop some baseline data to facilitate subsequent monitoring activities.

7. The study should assist the three operational departments of the CTA as well as its local representatives to improve and better target interventions and activities aimed at potential partners and beneficiaries (including women, youth, private sector and civil society organisations); to have a more informed picture of their needs and aid in the elaboration of a strategy and framework of action. The study should also highlight where there are specific needs for CTA's products and services thereby enabling improvement in the delivery of the same.

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1.3 Methodology

9. Data for the study was collected in two ways:

- desk review of available literature and information sources including the findings of programme evaluations; and
- the conduct of face-to-face interviews with relevant stakeholders/concerned parties.

No interviews were conducted with FAO, SPC and IRETA officials; they do not have offices in the Cook Islands. Comments relating to these organisations come from the author's long association with them and from the available records in MoA. They were nevertheless selected as key players because of the nature and extent of their involvement in agriculture sector development in the Cook Islands in collaboration with MoA over many years.

10. The write up of the study followed closely the format provided by CTA through its designated programme coordinator based in Suva, Fiji. After receiving and incorporating comments from him on an earlier draft, the report in draft was submitted to CTA headquarters in February 2004. Comments were received at the end of June 2004 and after incorporating them, this final report was resubmitted to CTA in July 2004.

2. COUNTRY PROFILE

2.1 Agriculture, Fisheries and Forestry

2.1.1 Agriculture

Agriculture population, land use, farmer categories

11. **Annex 2.1** gives the number of persons in agriculturally active households, by age group and location of household, as well as the number of persons in agriculturally active households, by gender, age group and location of household. It is evidenced from those tables that, despite agriculture taking 4th place in terms of revenue earned (after tourism, fisheries including pearl farming, banking and off-shore finance), the majority of the population (76%) are still actively involved in agriculture for either subsistence, commercial or both.

12. In terms of land use, the Cook Islands is divided into three agricultural groups; (i) Rarotonga which has the best arable land, (ii) other Southern Group islands (Aitutaki, Mangaia, Atiu, Mauke and Mitiaro) which have significant arable land resources, and (iii) Northern Group islands (Pukapuka, Nassau, Manihiki, Rakahanga, Penrhyn, Suvarrow and Palmerston) which are coral atolls with limited land resources, coconut trees being the primary vegetation. They contrast with the Southern Group islands (including Rarotonga) which are high volcanic islands with lush tropical vegetation and account for 90% of the total land area of the country.

13. Arable land is classified into two categories. Class 1 land is suitable for cash and subsistence crops, including vegetables. Class 2 land is suitable for tree crops only. Class 1 land is contained in the Southern Group islands (including Rarotonga), and 20% of arable land is classified as Class 1. A high proportion of arable land is not available for agriculture. The 1988 Agriculture Census indicated the total area of agriculture production at 2,800 ha (including fallow and Government land holdings used for agriculture), representing 20% of all arable land. By the year 2000 this has fallen to 2,390, the fall being attributed to non-agricultural use, mainly private and commercial buildings construction, sports fields and other recreational uses.

14. Both the 1988 and 2000 Agriculture Censuses used the same categorisation of farmers under the following 5 groups:

- i. **Commercial producer** – the level of agricultural activity where a household's main purpose for production is to have its produce sold locally or exported
- ii. **Subsistence with cash cropping** – the level of agricultural activity where a household's main purpose for production is to feed itself with any surplus being sold
- iii. **Subsistence only** – the level of agricultural activity where a household produces crops but does not sell for any significant amount
- iv. **Minor agricultural** – the level of agricultural activity where a household has only very few crops defined as less than 625 square yards (1/8 of an acre) of land under garden crops or less than 10 coconut trees or less than 10 trees bearing other tree crops
- v. **Non-agricultural** – the level of agricultural activity where a household does not engage in any crop production. Such households may own or look after land not in use and also own or look after livestock.

15. The 2000 report stated that there were 3,646 households in the country, 1,697 households (47%) were considered as agriculturally active. The remaining 53% were classified as minor agricultural households (29%) and non-agricultural (24%).

16. Of the agriculturally active households, a little over three quarters (76%) were dependent on agriculture subsistence only, while 15% were classified as subsistence with some cash cropping with the sale of agricultural produce by these households being of secondary importance. The remaining 9% were classified as commercial producers as the sale or export of their produce was the primary intention of their agricultural activity.

17. On a regional basis, 74% of households on other southern islands were classified as agriculturally active compared to 43% on the northern islands and 35% on Rarotonga. This difference in agricultural activity between the regions is explained by the much greater diversification of the economy on Rarotonga particularly in the trade, tourism and service sectors and on the northern islands, a dramatic shift to cultured black pearl farming, particularly on Manihiki, Penrhyn and recently Rakahanga.

18. On the mainland Rarotonga, it is quite common for crop producers to also keep livestock, mainly pigs and poultry for home consumption, and do fishing. This is the case as well in the outer islands but with a much higher proportion who fish. So it is not surprising to hear farmers talking about horticulture as well as fishing at the same time; in the case of the Cook Islands the two go hand in hand, just like bread and butter.

19. Almost all farmers plant more than one crop, i.e. there is no farmer specialising in just one crop. For livestock farmers, apart from the handful of commercial piggeries and 2 poultry farmers, all other farmers also plant crops as mentioned above. So mixed cropping is the norm in Cook Islands agriculture.

20. Due to the increased rate of building construction on Rarotonga, a lot of the good prime agricultural lands have been taken over – and most likely lost forever as far as agriculture is concerned. Although the Land Use Act of 1969 was meant to zone land according to use, it did not have the power to halt the transfer of land from agriculture to non-agricultural use. This is a pity because this will have implications on the ability of the mainland to produce in the future. On the other hand, this opens up opportunities for the southern islands, where land is still plentiful thanks to out-migration, to plant and supply Rarotonga.

Contribution to the economy

21. Cook Islands agriculture has undergone tremendous changes in the last 50 years. This transformation saw the Cook Islands economy move from one totally involved and dependent on subsistence agriculture, to one geared towards the promotion and commercial production of tropical fresh product exports to New Zealand in the 25 year period after World War II. Commercial agricultural production peaked in 1970 at over 10,000 tonnes (citrus, pineapple, banana, copra), and agriculture exports contributed around 66% of total export earnings.

22. Since 1970, there has been a long-term decline in commercial agriculture production, and by 1990 this was less than 2,000 tonnes and less than 20% of export earnings. This decline has continued to the present day, and the Cook Islands has many legacies of its past heavy commitment to commercial export agriculture.

23. Nevertheless, agriculture is a key element of Government's economic growth strategy in the context of the Economic Restructuring Program (ERP) which commenced in mid 1996.

24. Agriculture is still the main activity in the southern islands with the exception of Rarotonga where trade, tourism and the service-related sectors are the main sources of income. For the northern islands, pearl farming, subsistence fishing and home gardening predominate. For the country as a whole, agriculture and fisheries are the principle productive sectors of the economy, contributing an estimated 15.2% (at average 1990 prices) of the country's GDP in 2000 (*Cook Islands 2000 Census of Agriculture & Fisheries*).

Crops grown and marketing

25. The main agricultural produce grown in the country are; fruits (pawpaw, banana, breadfruit, coconut, citrus, pineapple, mangoes, avocado, noni), rootcrops (taro, tarua, sweet potato, cassava), vegetables (European/head cabbage, Chinese cabbage, tomato, capsicum, lettuce, sweet corn, watermelon, beans, cucumber, courgettes) and others (maire leis) which are exported weekly to Hawaii. Secondary crops include; fruits (Litchi, carambola, macadamia, coffee, chestnut), rootcrops (yam, turmeric, ginger), vegetables (carrot, chilli), and others (a range of herbs for medicinal and food flavouring purposes).

26. The main export markets are New Zealand for pawpaw & rootcrops, Hawaii for maire leis, and Japan for nono juice and fresh fish. Trade agreements that include agriculture are; the Cook Islands/New Zealand Bilateral Quarantine Agreement (BQA), Pacific Area Closer Economic Relations (PACER), and the Pacific Island Countries Trade Agreement (PICTA). The latter two are still to benefit the Cook Islands in a measurable way.

Agricultural policy

27. The Ministry of Agriculture (MoA) is the key player in developing agriculture. Its Vision is to ensure that the highest possible level of benefits from agriculture accrues to the community. This is backed up by its Mission which is to maximise exploitation of the potential in agriculture to advance the economic, social and environmental aspirations of the country in accordance with the principles of comparative advantage, through the application of agricultural technology and high standards of professionalism.

28. The Ministry's has identified in its policy document, a 5-point strategy to spearhead its programmes for the achievement of the above Vision and Mission. These are; (i) intensification strategy, (ii) diversification strategy, (iii) strategy for sustainable commercial agriculture development, (iv) post-harvest and processing facilities development strategy, and (v) institutional and behavioural development strategy. MoA's National Agriculture Strategic Plan (2001) from which the above has been extracted, gives a detailed strategic plan matrix outlining the necessary work-plans and activities for the achievement of the above strategy.

2.1.2 Fisheries

29. The Cook Islands has a relatively huge Exclusive Economic Zone (EEZ), totalling 2 million square kilometres of the South Pacific Ocean. A limit of 12 miles around each island is reserved for use by local fishermen for both home consumption and local sales. The rest can be fished by anybody, provided they have been granted licenses to fish inside the EEZ. Presently, a total of 35 licensed foreign fishing vessels operate within the country's EEZ. Surveillance is jointly done by the Cook Islands and New Zealand Maritime Services. A patrol boat has been donated by Australia for this purpose.

30. The main areas where fishermen go as recorded in the 2000 Agriculture & Fisheries Census are; lagoon, reef, outside or over the reef, and freshwater. The main forms of fishing are; gill & other nets, vertical long lining, drop lining, hook & line, trolling, deep

bottom, spear-gun, and collecting/gathering shells. Freshwater fishing is insignificant, being carried out on 4 islands and by only a hand-full of fishermen. This is related to the very small areas of fresh water reserves where fishing can be undertaken.

31. The Ministry of Marine Resources (MMR) is charged with the responsibility of ensuring the sustainable development of the living and non-living marine resources for the benefit of the Cook Islands. Its various divisions have clearly defined roles for the achievement of its stated objectives.

32. MMR works closely with other Government departments (e.g. with Health and Agriculture on Codex, Environment on reserves, Police on illegal fishing vessels) and also with international organisations. The latter includes; FFA, SOPAC, and SPC (*Ministry of Marine Resources Cook Islands, 2000; Government Budget 2003/04*)

33. In its budget of 2002/03 and 2003/04, MMR had 5 outputs to deliver;

Output 1: International/legal – to strengthen the policy and legal capacity of the Ministry to ensure the proactive participation in local, regional and international fisheries initiatives.

Output 2: Inshore fisheries & aquaculture – to facilitate the sustainable development of the pearl industry and the diversification, growth and sustainable management of the inshore fisheries sector.

Output 3: Offshore fisheries – to encourage growth in the local offshore fisheries sector whilst promoting sustainable and regionally compatible fisheries management regime that also includes the monitoring, control and surveillance of the EEZ.

Output 4: Extension & services – to provide relevant fisheries related training to increased the knowledge and skills of local fishermen and to develop an observer regime that meets regional standards.

Output 5: Corporate services – to provide senior management with accurate financial information, efficient and effective managerial support.

34. As is the case with MoA, under each of the above outputs, detailed work-plans, results and measures are outlined (*Ministry of Marine Resources Annual Report 2002/03, Government Budget 2003/04*).

35. In the last two years, revenue generated from commercial fishing totalled over \$6m. Fisheries, including pearl farming, is now the 2nd highest income earner for the country after tourism. Agriculture was the number 1 earner for all of history up to the late 1980s when tourism and pearl farming commenced on big commercial scales.

2.1.3 Forestry

36. A forestry programme was initiated in MoA partly to address the soil erosion problems caused by pineapple cultivation on the slopes of Mangaia and Atiu, the two main producing islands. NZAID provided finance and technical assistance during the first 7 years, but the economic reform of 1996 virtually put the programme on the back burner. It was drastically trimmed back in terms of manpower and resources, and the physical looking after of the trees was handed back to the landowners on these two islands.

37. The plantation forest today covers 1,100 hectares (2,700 acres). Approximately 95% of these are planted in *Pinus caribaea*. It is expected that the first harvest will be in 5

years time, although thinning has already begun with the thinned trees used by farmers as fence posts, temporary shacks at home and on the field, and minor repairs to garages.

38. The Ministry's current role in this area focuses on technical advice. The Ministry also facilitates the German-funded agroforestry awareness programme implemented through SPC (SPC/PGRFP) which concentrates on capacity building and empowering the communities to take full responsibility of their flora and land resources.

39. Towards the end of the forestry programme's life (mid 1990s), MoA developed a National Forest Policy (NFP) to provide information, directions and guidelines concerning the management and sustainable utilisation of the country's forests or forest based resources for the protection of the environment, social advancement and economic development.

40. Its goal was "to enhance the environmental, social and economic values of the nation's forests and ensure that their protection, management and utilisation will sustain those values for future generations." It had the following 4 objectives:

Objective 1: To manage and protect the forests in a manner that is acceptable, sustainable and in line with the forests defined and required functions as determined by the local community.

Objective 2: To stimulate and encourage community interest and participation in economic development activities related to the wise use of forest and resources derived from them. The utilisation of the forest resources should follow sustainable development principles.

Objective 3: To encourage and stimulate training activities and develop dialogue with resource owners on the need to sustainable protect, manage, and promote the forest resources.

Objective 4: For MoA to provide support through provision of research and advice on matters regarding the sustainable use of forest resources.
(*National Forest Policy, 1997*)

41. Apart from MoA and the Island Administrations of Mangaia and Atiu, no other Government department is involved in this programme.

3. OVERVIEW OF ICM ISSUES: CAPACITY, SERVICES & NEEDS

3.1 Information and Communication Management Capacity

42. Although the information and communication management capacity in MoA is being regarded as a high priority, the present number of staff purely devoted to the agriculture information/communication sector is unfortunately nil. The last time a fully functional information division existed in MoA was at the time of the country's economic reform of 1996. Up to this time, a Senior Information Officer, assisted by an Information Officer and a Librarian, were responsible for most of the information and communication management of the Ministry. Former Senior Information Officers had tertiary-level qualifications (Diploma and first degree level) in general agriculture.

43. All staff of the division went through several training programmes on information and communication management funded mainly by SPC and USP/IRETA. It was a common practice in the past for the Senior Information Officer to also act as the country's Agriculture Liaison Officer (ALO), the contact point and local coordinator for IRETA's training and information management programmes.

44. Since the abolition of the Information Division within MoA in 1996, agricultural information and communication "became everybody's responsibility." First, the planning division of MoA, whose main roles were conducting agricultural surveys of markets and land use trends, including production costs and formulation of project proposals, found itself picking up on a lot of the former Information Division's responsibilities. But the reform had an impact on Planning's staff numbers (reduced from 5 to 2).

45. This, together with their own responsibilities, meant that sustaining the information and communication management role of the former Information Division by Planning was simply not possible. The former Information Officer at the time of the reform was transferred to Planning, and continued the role associated with the ALO network to this day. The Project Officer is now the ALO coordinator and undertakes all information related duties of IRETA on behalf of the ALO Pacific Network. They meet annually (mostly in Samoa).

46. The current situation in respect of information communication and management is, as mentioned above, the responsibility of everybody. Apart from the ALO, managing agricultural information is "delegated" to the responsible staff. This means, for example, if any farmer wants information on any aspect related to livestock, he goes to the Chief Livestock Officer and/or his staff, import/export requirements to the Quarantine Officers, crop production to the Research/Extension Officers, pest management to the Entomologist, etc. So far, all staff have done their best in assisting farmers and the general public with enquiries. Once the research station's library is up and running (with funding assistance being kindly provided by SPC), it will become another good source of information for farmers and the general public.

47. Presently therefore, agricultural information (including information on forestry) management and communication is "imbedded" one way or another in all divisions of MoA. There is therefore no budget actually set aside in MoA's budget for pure information management work. Rather, the budget allocations of each division implicitly take on the information responsibilities as well. Apart from hiring a Senior Project Officer in the 2004/05 budget who will look after the CTA-funded media promotion programme, it is the intention of MoA to strengthen this service as soon as resources allow. This will

involve hiring extra staff and procuring necessary supplies and equipments. Outside assistance in this respect would be most welcome.

48. **Annex 2.3** presents the various means of media and telecommunications. So as far as outlets are concerned, there does not seem to be any deficiency in this area. People are pretty well served by the various means of communication, i.e. TV, radio, newspapers, phone, fax, email. But the capacity of MoA to take full advantage of these means is limited mainly by the local budget.

3.2 Agricultural Information and Services

49. MoA is the main provider of information relating to crop and livestock production and management. Information provided covers the following:

HORTICULTURE

- Plant spacing – recommended spacings for various crops to maximise yields, minimise waste (by too wide spacings), and for easy access of machineries for weed and pest control, and fertiliser application (if mechanical methods are used)
- Seeds – different varieties and their features, domestic and overseas suppliers, seed raising techniques, nursery management and field transplanting methods
- Fertiliser – different types for different crops, rates, application methods and intervals, symptoms of deficiencies and how best to alleviate them
- Chemicals – different types for different crops, rates, application times and intervals, symptoms of deficiencies and how best to alleviate them, use of safety and protective gear
- Pests (insects, diseases) – different types attacking different crops, their methods of control/management
- Soil – suitability for different crops, location of various types of soil, pH levels
- Irrigation – methods, which crops to irrigate, water requirements of different crops
- Harvesting and post-harvest storage, packaging
- Procedures for exporting in terms of the quarantine requirements of the importing countries
- Production costs of selected crops

LIVESTOCK

- Livestock diseases, especially those affecting the main livestock types in the country, i.e. pigs, poultry, goats and cattle
- Symptoms of stock diseases and their control/management
- Information on livestock drugs – what to use for different diseases, how often, the rates of application
- Stock breeding methods to improve productivity and meat quality
- Slaughtering techniques to maintain meat quality and to satisfy Public Health guidelines on hygiene
- Spaying and neutering – up to now, the Ministry staff are still involved in the spaying and neutering of pigs

50. The above information are provided to farmers in the following forms:

- Technical advice – through farmers visiting the Ministry office, field visits by the Ministry's extension officers, field days organised by the Ministry, and through the media (refer to CTA-funded project on promoting agricultural activities mentioned in **Annex 2.3**)
- Printed material – flyers, photocopies of available literature
- Access to computer databases – only a handful of farmers use this service

- Access to the Ministry library – only a handful of farmers use this service

51. Other national sources of information:

- National library – general agriculture (not often used by farmers as most of what they wanted to know are sourced from MoA)
- Farmer-farmer contacts – sharing of farming experiences. Some farmers pick up ideas from observations during personal or training visits overseas, e.g. farmer study visits funded by CTA through IRETA's programmes
- Agents directly involved in agriculture – e.g. Cook Islands Marketing Services, Rarotonga Nita Growers Association – information on markets and prices
- Importers of agricultural inputs – e.g. CITC for seeds and nursery supplies

52. Information from abroad (regional such as SPC, SOA, IRETA, and international such as CTA, FAO) which is sought by MoA for the benefit of farmers includes the following:

- New developments in pest management, particularly those relating to pest outbreaks and incursions
- New fertilisers and chemicals, including related information on usage and application intervals, rates, for different crop types
- Developments relating to the emerging organic agriculture industry
- Plant genetic resources
- Issues related to biosecurity/quarantine that will directly impact farmers

53. The above are regularly sought by the Ministry to continuously update itself so as to better serve farmers and bring to their awareness about developments in agriculture outside of the farm gate.

54. As far as the Ministry is concerned, apart from a couple of individuals and progressive farmers who attempt to seek their own information from abroad for their own personal use, no other farmer or organisation is doing this for the benefit of farmers in general.

3.3 Needs Analysis

3.3.1 *Information Needs*

55. From formal and informal discussions with stakeholders including farmers as well as senior technical staff of the Ministry, literature, and the author's 25 years experience in Cook Islands agriculture sector development, the following are the perceived needs in as far as agricultural information is concerned, i.e. the types of information frequently sought by farmers irrespective of their classification, be they commercial, semi-subsistence or subsistence:

Pest control/management

56. Whatever crop is planted, there are always pest attacks by insects and/or diseases, although the level varies from crop to crop and the time of the year. While some crops, mainly vegetables, tend to be attacked quite often, there are crops, mainly food crops such as sweet potato, cassava, and taro, that tend to get attacked less often. Also, at certain times of the year (mainly the cooler months), the attacks tend to be noticeably less common than during the wet warm summer months.

57. On the basis of the above, farmers therefore want to know what to use when pests do attack (which chemicals for which crops), how to use (rates of application, necessary protective gear), and when to use (timing including waiting periods) to control or at least manage horticultural pests so that yields are not affected or significantly affected, and so ensuring good returns and maximising profits. Included in this category are information on new chemicals that are less hazardous to health, chemicals that are able to perform better than conventional ones in terms of effectiveness in controlling pests, and longer waiting periods, and equally important are alternatives to the use of chemicals for pest management.

58. With concern for the environment and health, an increasing number of farmers are on the look out for methods that will reduce or even completely do away with the need for the control and management of agricultural pests by artificial means. Examples might include; (i) new seed varieties (see below) that are more tolerant to pests so therefore reducing their mechanical or artificial control, (ii) planting “repellent” plants and scrubs, i.e. those that have characteristics such as odour which tend to repel certain pests, and (iii) integrated pests management (IPM).

59. The forever-increasing costs of chemicals, almost all of which are imported from New Zealand (very small quantities are sourced from Australia), are encouraging farmers to look elsewhere for alternatives or for chemical-free methods of pest management. The environmental advocates or “greenies” as they are popularly known, of which their numbers and supporters are on the increase both locally and abroad, are also making lots of noises with respect to the need to take good care of the environment. To this end, they strongly advocate a chemical-free regime of land use.

Fertilisers

60. Because of the high costs of imported inorganic fertilisers, farmers naturally want to maximise the benefits derived from their use. As far as fertiliser use is concerned, farmers are therefore interested in; (i) the optimal rates to apply, (ii) intervals of application to minimise wastage, (iii) slow-release fertilisers that lasts longer and are better utilised by plants, (iv) fertiliser types most suited for different crops, (v) the different types of organic fertilisers available, and (vi) all aspects related to composting (how best to prepare, waiting period before use, application rates). As with chemicals, almost all fertilisers are imported from New Zealand.

Seeds

61. Information requirements by farmers on seeds relate to vegetables only. Seeds or planting materials for fruits and rootcrops does not appear to be a problem. The problem is more towards insufficient supplies at times, rather than non-availability or non-suitability. Since the local population started planting leafy (e.g. cauliflower, cabbage) and fruit-type (e.g. water melon, tomato) vegetables in the late 1960s when low-scale tourism started, seeds have always been a problem. The problem relates to suitability to the local tropical climate, availability when needed, and in recent times price which seems to increase on a yearly basis.

62. Farmers need information on improved seeds in terms of high yielding, suitability to local climate, “use-again” frequency (some hybrid varieties can be used for 1 or 2 more times) which can contribute to reducing costs (good seeds now on the market are relatively expensive), best methods of storage to prolong seed life, and alternative seed sources, especially those which are suitable for the local tropical climate. The Ministry over the last 3 years has sourced seeds for trial purposes from countries like Taiwan,

China and Korea. Unfortunately, their performances under local conditions have not been significantly different from the traditional suppliers of Yates and Talkie.

Markets

63. When farmers talk about markets, they normally refer to the availability of market outlets (both locally and overseas) for their produce, and the price ranges they are likely to face including the frequency of payment. When markets or buyers respond, they normally demand consistency of supply and premium quality at all times. They usually don't worry too much about prices; once they are satisfied with regular supplies and high or satisfactory levels of quality, buyers are normally prepared to pay premium prices.

64. During their negotiations, other equally important aspects come into the equation. These include; (i) transport and distribution systems which will ensure products getting to the markets in top form, (ii) the quarantine or protocol requirements of the importing countries, and (iii) the preferred packaging and presentation of products as dictated by the buyers.

65. These are the kinds of information farmers require to assist them in their decision making process as far as the markets are concerned.

Animal Production & Health

66. Domesticated animals (essentially pigs, goats and chicken) are very much part of the daily lives of the resident population, much like the status and significance of rice in Asia. As such, stock owners are therefore constantly on the look out for: new breeds to improve animal productivity and meat quality, signs of disease infections and their remedy, livestock drugs and their use rates, feed types and application rates, and new housing designs to reduce costs and better stock management.

67. However, a recent animal genetic resources survey assisted by FAO indicated that there are certain features and characteristics of local stock breeds that should be preserved because they appear to have the tendency to perform better in some ways than the improved introduced stock. For example, heat tolerance levels, fat/meat ratio, resistance to certain diseases, less water requirements, etc. Livestock farmers will find such information quite useful to their farming activities.

Fisheries

68. As mentioned in paragraph 18, horticulture and fishing go hand in hand. A lot of fishermen, especially in the outer islands, are also horticulturists. It is very easy to understand why this is so; at meal times, whether at home or in a community function, food on the table is always a combination of the goodness of the land and sea. There is simply no meal in the country where the food is only seafood or only crops. Such is the significance of fishing in relation to growing.

69. As all of the local fishermen can be classified as small subsistence and semi-subsistence fishermen, their information requirements are therefore generally simple and straightforward. They normally enquire about the different fish types at various spots or grounds, the timing of when species frequent certain spots, sources and prices of fishing gear including small outboard motor boats and motors, and in some cases market outlets. Concerning pearl farming, their main concern is disease infestation. However, most of the information they seek are already readily available; from their own colleagues, from the local agents for marine gear and equipment, and certainly from MMR itself who also receives technical and financial assistance from its partners abroad.

70. The recent expansion of off-shore fishing involving licensed foreign fishing vessels also have information requirements of about the same nature but at much bigger scales. Their requirements, which they themselves satisfy through their own contacts with overseas partners and with some inputs from MMR, include; fertile fishing grounds beyond the 12-mile zone exclusive to local fishermen only, heavy equipment used for deep-sea fishing and trolling, international markets and prices, and protocol for fish exports.

Forestry

71. Apart from the short-lived forestry programme in MoA which was eventually abolished during the country's economic reform in 1996, forestry development has not had much impact on the lives of Cook Islanders. Residents have always taken the natural flora and cover as part and parcel of the natural environment which they have enjoyed together with planting and fishing. People have been using the forest cover in a sustainable way (in terms of using certain timber species for firewood, fence posts, shacks/temporary houses, making canoes, etc.) for many generations now with no visible adverse effects. The needs of the people in terms of forestry use are therefore already being met, i.e. there does not appear to be an urgent need from outside of the country in as far as information on forestry is concerned.

72. With the forestry programme and division no longer existing, the Ministry's current role in this area focuses on technical advice. It facilitates the German-funded agroforestry awareness programme implemented through SPC (SPC/PGRFP) which concentrates on capacity building and empowering the communities to take full responsibility of their flora and land resources.

3.3.2 Capacity Building Needs

73. Capacity building, manpower training, personnel upskilling, skills enhancement, are all terms meaning the same thing. As far as information in agriculture is concerned, capacity building has a significant role to play in getting the necessary information to the farmer so that it can be turned into a useful and powerful tool in his decision-making process. In order that this can be realised, capacity building needs necessarily include the following:

Staff training

74. Over the years, staff have been properly trained in the management of information from outside (local and overseas sources). In the early 1990s when MoA was still located on other premises, an expatriate Librarian brought in by Government was seconded to the Ministry for 3 months to organise its library and train Ministry staff in the proper management of useful agricultural information for the benefit of both farmers and extension/research staff. The programme proved quite useful until the trained staff joined one of the outward-bound plane-loads of locals heading overseas to start a new life.

75. With a relatively mobile local population (due to being NZ citizens), it is therefore crucial that an on-going programme of staff training to enable a sustainable system of efficient agricultural information management is put in place as soon as possible. This should reduce problems associated with trained staff leaving after being taken through the ropes. Such a training programme should ideally include the actual carrying out of communication activities so that staff feel confident about actually disseminating the accumulated information. After all, no information is useful until a use is made of it.

76. Staff can be trained in different ways; on-the-job by an experienced trainer, attachment to a suitable organisation (like the national library, SPC library in Suva, one of the libraries in New Zealand, etc.), or participating in organised training programmes on information systems management and use.

Equipment

77. Like a lot of activities, the use of equipment is indispensable. The required equipment can be basic (stationery, pens, field boards, folders, etc.), standard (tape recorders, book shelves for the library, filing cabinets), or state-of-the-art (data projectors, computers with the latest designer packages, databases).

78. One of the most effective equipment being used is the video camera. It's a proven fact that the use of visual aids, particularly moving pictures, enhances people's power of memorising or retaining something compared to, for example, printed material and listening to a lecture. With the large number of people owning television sets (3,850 in 2001 and increasing), people wishing to get their message across (Government agencies, NGOs, private/business sector) have relied heavily on TV as opposed to the print media.

Strategy

79. While staff training and equipment are certainly indispensable in enhancing capacity for effective information dissemination, the existence of a strategic policy to carry out information activities is equally, if not of greater, significance. A clearly defined policy and strategy to give direction and purpose to activities related to information has to be put in place; this dictates the way things should go in as far as agricultural information management is concerned.

80. Unfortunately such is not the case in the leading agencies concerning agriculture development, even in MoA. Although MoA's policy did mention about the creation of information systems to support the marketing of agricultural products, there is no well defined strategy as to how this can be achieved. It is therefore crucial that an appropriate strategy is formalised and endorsed by the agencies' senior management.

4. CONCLUSIONS AND RECOMMENDATIONS

4.1 Conclusions

81. This study has identified the current information needs, in order of priority, to be as follows:

4.1.1 *Information needs*

➤ Pest control/management

82. Attack by important agricultural pests can lead to a total loss of crop. Farmers therefore want to know as much as they can about the types of chemicals to use for different pests and for different crops, including the associated useful information on rates of application, protective gear, and timing. Included in this category is information on new chemicals that are less hazardous to health, chemicals that are able to perform better than conventional ones in terms of effectiveness in controlling pests, and longer waiting periods, and equally important are alternatives to the use of chemicals for pest management.

➤ Markets

83. For farmers to make money, market accessibility is critical (as opposed to planting for home use only). Information on markets (outlets, prices, peak/low seasons, supplies, etc.) is therefore important to the decisions the farmer has to make on the field. Other equally important issues include information on transport and distribution systems which will ensure products getting to the markets in top form, the quarantine or protocol requirements of the importing countries, and the preferred packaging and presentation of products as dictated by the buyers.

➤ Seeds

84. Farmers need information on improved seeds in terms of high yielding, suitability to local climate, “use-again” frequency (some hybrid varieties can be used for 1 or 2 more times) which can contribute to reducing costs (good seeds now on the market are relatively expensive), best methods of storage to prolong seed life, and alternative seed sources, especially those which are suitable for the local tropical climate. The Ministry over the last 3 years has sourced seeds for trial purposes from countries like Taiwan, China and Korea. Unfortunately, seeds performance from these sources has not been significantly different from that of the traditional suppliers of Yates and Takii.

➤ Animal Production & Health

85. Domesticated animals (essentially pigs, goats and chicken) are very much part of the daily lives of the resident population, much like the status and significance of rice in Asia. As such, stock owners are therefore constantly on the look out for; new breeds to improve animal productivity and meat quality, signs of disease infections and their remedy, livestock drugs and their use rates, feed types and application rates, and new housing designs to reduce costs and better stock management.

Fertilisers

86. Because of the high costs of imported inorganic fertilisers, farmers naturally want to maximise the benefits derived from their use. As far as fertiliser use is concerned, farmers are therefore interested in; (i) the optimal rates to apply, (ii) intervals of application to minimise wastage, (iii) slow-release fertilisers that lasts longer and are better utilised by plants, (iv) fertiliser types most suited for different crops, (v) the different types of organic fertilisers available, and (vi) all aspects related to composting (how best to prepare, waiting period before use, application rates).

87. In terms of capacity building, the identified needs specifically in agriculture in order of priority are as follows:

4.1.2 Capacity building needs

➤ Staff training

88. Former trained staff in agriculture information management and communications have moved on. It is therefore crucial that an on-going programme of staff training to enable a sustainable system of efficient agricultural information management is put in place as soon as possible. This should reduce problems associated with trained staff leaving after being taken through the ropes. Staff can be trained in different ways; on-the-job by an experienced trainer, attachment to a suitable organisation (like the national library, SPC library in Suva, one of the libraries in New Zealand, etc.), or participating in organised training programmes on information systems management and use. Added to this would be other issues such as the careful identification of training needs, and the elaboration of a training plan.

➤ Equipment

89. With the non-existence of a proper Information Division in MoA, equipment specifically for purposes of information management and communication therefore does not exist. This calls for a revival of the division and the equipping of it with all the necessary tools to enable it to undertake the required information activities. This means stationery, pens, field boards, folders, tape recorders, book shelves for the library, filing cabinets, data projectors, computers with the latest designer packages, databases.

➤ Strategy

90. A clearly defined policy and strategy to give direction and purpose to activities related to information is necessary and should be put in place; this dictates the way things should go in as far as agricultural information management is concerned. Although MoA's policy did mention about the creation of information systems to support the marketing of agricultural products, there is no well defined strategy as to how this can be achieved.

➤ Fisheries

91. It is important that MMR maintains and improves on its current extension programme involving collecting and dissemination useful and necessary information that will benefit both the small local fishermen as well as those holding licenses to fish within the country's EEZ. The significance of both the local and the emerging export markets must be protected and nurtured for sustained growth and expansion which will further contribute to the country's socio-economic development.

➤ Forestry

92. The Ministry's current role which focuses on technical advice should continue. It needs to maintain its facilitative role with respect to the German-funded agroforestry awareness programme implemented through SPC (SPC/PGRFP) which concentrates on capacity building and empowering the communities to take full responsibility of their flora and land resources.

4.2 Recommendations

93. Following closely the format suggested for this section by the study's regional coordinator, the recommendations outlined below make reference to the 'key problems' being addressed in 2004 by CTA's three operational programmes and *the extent to which these are problem areas in the Cook Islands, with special emphasis on MoA as the key player and facilitator of agriculture sector development*. Potential areas for collaboration with CTA and where it might be able to add value, are also highlighted:

94. Under INFORMATION PRODUCTS AND SERVICES, the key problems to be addressed are:

- limited availability of publications that support decision-making in the agricultural sector

Prior to becoming an ACP member in 2000 and thereby qualifying to access assistance offered by CTA, the country had limited access to publications made available by or through CTA. Now however, updates on publications sponsored by CTA or made available through it are regularly received by the country as one of its entitlements. The country has not yet fully utilised this service. Therefore this is presently not a problem area; the Cook Islands in terms of MoA just have to make full use of this generous service.

- shortage of relevant published information on agriculture and rural development, because of weak local publishing structure

There is certainly a lot of information produced or available locally (e.g. from MoA research activities, consultancies undertaken on agriculture, outdated materials) that is meant for dissemination to farmers. This information is produced by MoA and visiting agriculture consultants, and covers areas such as production costs, pest infestations, viability of producing certain crops, agro-processing, innovations, etc. Over the years, some of this information has actually been disseminated after mass production, but resources for continued production and publication have never been ascertained. An example is the series of production cost notes of selected crops, and flyers/brochures/leaflets on crop production and management that cannot be published on a regular basis because of limited resources. The problem is not so much the weak local publishing structure as the private sector now has quite an efficient handful of professional printers/publishers publishing and printing mainly non-agricultural materials in both the local and English languages; rather, the problem is finance to enable publication or continuous publication of information. There may be room here for collaboration with CTA.

- limited access to locally and externally published information on agriculture and rural development, due to weak distribution infrastructure

This is partly related to the second bullet point of paragraph 94 above. While the country has not yet taken full advantage of the services offered by CTA in terms of the publications it can make available, it is nevertheless a fact that the local distribution infrastructure is weak. With no viable information division to spearhead distribution, and with reliance on the one-man ALO who distributes IRETA's newsletters using MoA's limited communications budget, efficiency in getting locally and externally published information on agriculture and rural development is certainly an issue. CTA may wish to pursue this matter further through part-equipping MoA's information division once it is revived.

- limited awareness of the existing local and external sources of information and the type of products and services available.

As mentioned in the first bullet point of paragraph 94 above, the country is just coming around to realising what can be made available through CTA, being a new member. What is available through other organisations (e.g. from SPC, FAO, IRETA, etc.) are reasonably well known because of the country's long association with such organisations. Each technical division seeks information relevant to its own programmes. To this end, CTA's continued updating of the country in as far as its publications list is concerned, would be much appreciated.

95. Under COMMUNICATION CHANNELS AND SERVICES, the key problems to be addressed are:

- limited contacts among ACP stakeholders and between the latter and experts from other countries and regions

As far as MoA is concerned, its contacts with stakeholders, colleagues and development partners from other countries within the (South Pacific) region are reasonably on a good footing, thanks to regular forums (e.g. PHALPS, PPPO, TAROGEN, Agriculture Ministers Meeting, RBM, PGR, PGRFP, COGENT, etc.) and organised workshops and training programmes, and of course the modern efficient means of communications (e.g. email). With the expected continuation of this state of affairs, contacts amongst stakeholders are therefore expected to continue as well as improve. CTA's financial contributions to such contacts (e.g. IRETA stakeholders meeting and other meetings sponsored by CTA) would no doubt be much appreciated by the facilitators of agriculture sector development in the region. Furthermore, CTA might consider encouraging more regular contacts between those in the region with those outside of the region.

- weak networking services, such as newsletters, web sites, etc.

The country, being an open economy like others, has been networking through newsletters and emails, apart from the old systems of postage, telephone, radio and personal contacts. While networking services have come a long way, there is certainly plenty of room for improvement. The present system of networking, at least in MoA, can certainly be improved through the revival and strengthening of its information division and service. This is an internal matter for MoA to undertake in terms of manpower and local resources; whatever CTA is able to contribute to this end would be much appreciated.

- limited first-hand experience of pertinent developments in other countries and regions

True in as far as developments outside of the (South Pacific) region is concerned, but certainly on the contrary within the region. It is quite possible that organised study visits to countries outside of the region – those with similar size economies or agricultural systems in developing member states – will be able to “close or narrow the gap.” CTA may wish to consider sponsoring more of such study visits – either by MoA staff, selected farmers or both.

- limited use of ICTs for networking and dialogue

As mentioned elsewhere in this report, the country has taken part in “following the trend” of ICTs use for networking and dialogue. It is expected that over time, more and more will join the band wagon.

96. Under ICM SKILLS AND SYSTEMS, the key problems to be addressed are:

- failure to take full advantage of opportunities for using radio, TV and other non-print media in communicating agricultural information and knowledge.

MoA had limited funds for this and as a result submitted a proposal in early 2003 for CTA funding assistance. CTA’s kind assistance through its ICM Skills and Systems Department has enabled MoA to significantly step up its mass media promotion of its activities and programmes for the benefit of both farmers and the general travelling public. The 12-months project runs from November 2003 to October 2004. The significance and popularity of the project amongst the target audience is such that MoA humbly requests CTA for continued funding for another 12 months after next October. The project has certainly enabled a lot more useful information to reach the target audience (refer separate report submitted to CTA on this project).

- lack of expertise in the area of information and communication management (ICM) skills

*This was identified to be an important problem in **section 3**. While actual staffing (i.e. employing additional staff) is an internal matter which MoA must address as soon as conveniently possible, whatever CTA is able to contribute (equipment and supplies for effective agricultural information communications and management) would be much appreciated. Second, recognising the budget and staffing limitations, some training appears necessary to increase the information and communication management capacity of all MoA staff having a public outreach role.*

- limited opportunities to acquire relevant information and communication technology (ICT) skills

With no information service in MoA, opportunities in this area are certainly limited. While staff may be involved in networking with their colleagues and others abroad with respect to their own areas, skills specifically on ICT are not adequately developed. It may be useful for CTA to convene a regional workshop to help ministries of agriculture design appropriate information and communication management policies and strategies.

- weak ICM policies and strategies

*True, as explained in **section 3**. A problem that is more internal than external. MoA should really address this matter at the earliest opportunity, especially on the staffing*

side. Only after this is done will the proposed regional ICT training above and ICM systems below be appropriate.

- limited knowledge of the design of cost-effective and participatory ICM systems

As above. It may be useful for CTA to convene a regional workshop to help ministries of agriculture (such as MoA) design appropriate information and communication management policies and strategies.

- limited management techniques for the implementation of ICM projects and services.

As above. It may be useful for CTA to convene a regional workshop to help ministries of agriculture (such as MoA) design appropriate information and communication management policies and strategies.

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ANNEXES

1. TERMS OF REFERENCE
2. COUNTRY PROFILE
 - 2.1 General Agricultural Profile
 - 2.2 Socio-economic Profile
 - 2.3 Media and Telecommunications
3. PROFILE OF INSTITUTIONS
 - 3.1 Institutions Involved in Agriculture and Rural Development
 - 3.2 Key Institutions Involved in Agriculture and Rural Development
4. PERSONS CONTACTED

ANNEX 1: TERMS OF REFERENCE

<p>ASSESSMENT OF AGRICULTURAL INFORMATION NEEDS & IN AFRICAN, CARIBBEAN & PACIFIC (ACP) STATES Phase 1: Pacific</p>

1. Introduction

The Technical Centre for Agricultural and Rural Cooperation (CTA) was established in 1983 under the Lomé Convention between the ACP (African, Caribbean and Pacific) Group of States and the European Union Member States. Since 2000, it has operated within the framework of the ACP-EC Cotonou Agreement.

CTA's tasks are to develop and provide services that improve access to information for agricultural and rural development, and to strengthen the capacity of ACP countries to produce, acquire, exchange and utilise information in this area. CTA's programmes are organised around three principal activities: providing an increasing range and quantity of information products and services and enhancing awareness of relevant information sources; supporting the integrated use of appropriate communication channels and intensifying contacts and information exchange (particularly intra-ACP); and developing ACP capacity to generate and manage agricultural information and to formulate information and communication management (ICM) strategies, including those relevant to science and technology. These activities take account of methodological developments in cross-cutting issues (gender, youth, information & communication technologies – ICTs, and social capital), findings from impact assessments and evaluations of ongoing programmes as well as priority information themes for ACP agriculture¹.

In January 2002, CTA's Strategic Plan (2001-2005) was implemented and CTA's activities were distributed among three operational programme areas / departments:

- Information Products and Services
- Communication Channels and Services
- Information and Communication Management Skills and Systems

These operational departments are supported by Planning Corporate Services (P&CS) which is charged with the methodological underpinning of their work and monitoring the ACP environment in order to identify emerging issues and trends and make proposals for their translation into programmes and activities. This current exercise, therefore, falls within the mandate of P&CS.

2. Main issues

CTA works primarily through intermediary organisations and partners (non-governmental organisations, farmers' organisations, regional organisations, ...) to promote agriculture and rural development. Through partnerships, CTA hopes to increase the number of ACP organisations capable of generating and managing information and developing their own information and communication management strategies. The identification of appropriate partners is therefore of primordial importance.

The "Evaluation of the Implementation of the Mid-Term Plan (1997 – 2000)" emphasised the need for CTA to develop a more pro-active approach and elaborate criteria for decision-making with regard to the choice of partner organisations and beneficiaries. Based on this evaluation, the "Strategic Plan and Framework for Action – 2001 – 2005" identifies strategic issues for CTA being: improved targeting (including partnerships and beneficiaries), geographical coverage, decentralisation, regionalisation and thematic orientation. The Plan also expresses concern about:

¹ Priority information themes for ACP agriculture have formed the basis of various several studies, workshops and seminars bringing together various stakeholders, organisations and institutions active in the field of agriculture and rural development. The documents (or extracts thereof) will be provided to the consultants.

the extent to which CTA's activities are relevant to and reach the poor, gender awareness and how to identify potential partners especially in the independent sectors.

Besides partner identification and selection issues, the observation has also been made that, traditionally, the Pacific and Caribbean regions have not received sufficient attention in CTA's programme and activities. This is, for example, highlighted in the statistics on the number of individuals and organisations which receiving CTA publications or participating in workshops and training courses. Furthermore, the admission of 6 new Pacific member states under the Cotonou Agreement means not much known about them, hence the need to develop CTA intervention strategy and provide more targeted assistance.

Finally, various national and regional partners with whom CTA has had a long-standing relationship have requested the current study in order to provide more targeted assistance to their beneficiaries.

3. Objectives and scope of the study

The objectives of the study are as follows:

- to identify agricultural information needs of key actors / beneficiaries for CTA products and services;
- to identify needs of potential actors / beneficiaries of CTA activities and services in terms of building capacity for information and communication management;
- to identify potential partners / beneficiaries for CTA activities and services;
- to develop some baseline data to facilitate subsequent monitoring activities.

The study should assist the three operational departments of the CTA as well as its local representatives to improve and better target interventions and activities aimed at potential partners and beneficiaries (including women, youth, private sector and civil society organisations); to have a more informed picture of their needs and aid in the elaboration of a strategy and framework of action. The study should also highlight where there are specific needs for CTA's products and services thereby enabling improvement in the delivery of the same.

4. Methodology

The consultant will use a combination of qualitative and quantitative rapid appraisal methods including:

- the desk review of available literature and information sources including the findings of programme evaluations;
- the conduct of face-to-face interviews with relevant stakeholders / concerned parties;
- the limited use of questionnaires.

The rapid appraisal approach will allow a general overview of the key issues and company / organisational profiles on a per country² basis and may give rise to more in-depth studies as and when needed in the future.

5. Expected outcomes / output

One main report per country not exceeding 20 pages according to the following table of contents:

Main report

1. Executive summary
2. Introduction
3. Country profile – summary structure and economic characteristics with particular attention to agricultural sector (includes fisheries and forestry):
 - Summary of how agriculture, fisheries and forestry is organised in the country
 - Summary of the information and communication management capacity
 - The current source of agricultural information and services (synthesise Annex 3)

² Out of 30 countries comprising the Caribbean and Pacific regions, only selected number will initially be the subjects of studies, with domestic consultants conducting country-specific assessments. Country selection will be done by CTA on the basis of specific criteria.

4. Needs analysis
 - Information needs
 - Capacity building needs (skills, training, media, ICT, equipment)
5. Conclusions and recommendations
6. References

Annexes

1. Terms of reference
2. Country profile
 - 2.1 General agricultural profile (from available documentation)
 - Size of agricultural population (male / female / youth)
 - Farmed land, forests, fishing areas
 - Agricultural systems
 - Agriculture in the economy (percentage GDP)
 - Main agricultural produce and secondary products
 - Main export markets
 - Trade agreements that include agriculture
 - Sectoral policy related to agriculture, fisheries and forests
 - 2.2 Socio-economic profile (from available documentation)
 - Total active population, demographic breakdown
 - Literacy level and languages
 - Access to services (health, schools, electricity)
 - Rural urban drift
 - 2.3 Media and telecommunications (update / check)
 - Newspapers, periodicals, magazines, radio stations, television channels,
 - Telecommunication services (fixed, mobile, etc.)
 - Computers and Internet access
3. Profile of institutions
 - List of all institutions involved in agriculture and rural development activities, including private sector and civil society organisations, with name, contact details, type and role of institution
 - Select list of key institutions involved in agriculture and rural development, with extensive data and information on the institution, the problems faced and why it is considered a key actor

It is also expected that the results of this study will lead to identification / update of some priority agricultural information themes which will feed into a possible priority-setting exercise in the Pacific in 2004.

6. Reporting

The country reports will not exceed 20 pages (excluding annexes). The annexes should include a list of acronyms, of persons/institutions interviewed with addresses, phone, fax numbers, e-mail addresses (if any) as well as bibliography.

7. Timing

- Draft final report is to be submitted within two months after contract signature by CTA
- Final report due two weeks after receipt of comments from CTA.

8. Expertise needed

The overall coordination will be carried out by Ms Christine Webster, Deputy Head, Planning and Corporate Services CTA, assisted by Mrs Lola Visser-Mabogunje, Project Assistant.

Mr. Peter Walton will ensure the regional coordination and lead a team of local consultants to be identified per country³:

³ Final list of countries to be confirmed by 31/01/04.

Local Consultant	Country
Mr. Nga Mataio	Cook Islands
Ms. Makelesi Tavaia	Fiji
Mr. James T. Movick	Federated States of Micronesia
Dr. Mareko Tofinga	Samoa
Mr. Pita Taufatofua	Tonga
To be identified	Vanuatu
To be identified	Papua New Guinea

The expert should have a university degree or equivalent by experience. In addition, he/she should have at least 10 years experience in field of agriculture, rural development or social / economic sciences. He/she must have in-depth knowledge of the agricultural sector in his/her country and be able to identify key players and institutions / organisations active in this area. The ability to communicate and write clearly in English is essential, while knowledge of at least one of the local languages for communication / interview purposes is an added advantage.

9. Implementation schedule (CTA)

- Preparation/Finalisation of ToR; Identification/ short-listing of (potential) consultants; Call for offers (15 September – 10 November)
- Selection of consultants: (11 – 15 November)
- Contractual arrangements/ briefing (16 November – 10 December)
- Start date of contract: 11 December 2003
- Implementation period 11 December 2003 – 9 April 2004
- End date of contract: 10 April 2004

10. Key documents to be made available to consultants

Documents include:

- Cotonou Framework Agreement
- Excerpts of relevant sections of CTA's Strategic Plan and Plan of Action (2001-2005)
- Annual Reports
- Documents on priority information themes identified for the Caribbean & Pacific region
- Documents on products & services provided by CTA

11. Role of Regional Coordinator

- Attend briefing meeting at CTA
- Review the terms of reference
- Finalise questionnaires and methodological approach after due consultation with CTA Team
- Draw up briefing notes and guidelines for local consultants to ensure accurate and consistent application of the agreed methodology in data collection
- Responsibility for the implementation of the study and interpretation of technical queries to local consultants
- During the study, monitor and provide technical assistance to the local consultants
- Review preliminary country reports and findings and send comments back to local consultants
- Coordinate and ensure consistency of country reports
- In conjunction with the CTA Team, prepare the overall report taking into account the findings and recommendations of all the Pacific country reports (table of contents to be agreed by 31/01/04).

12. Role of Local Consultants

- Familiarise themselves with background documents received from CTA; including the Terms of Reference
- Conduct interviews and gather in countries specified in the contract
- Undertake field visits in countries specified in the contract
- Draft initial country reports and send to Regional Coordinator for initial comments

- Based on comments received from Coordinator, revise country reports and send draft report to CTA
- Finalise country reports based on comments and observations received from CTA and send back to CTA

13. Role of CTA (Overall coordination CWE, assisted by TVI)

- Establish contacts with the Regional Coordinator and the ACP Local Consultants
 - Draw up Terms of Reference and other relevant documents
 - Invite the Regional Coordinator for Briefing Meeting
 - In consultation with the Regional Coordinator, draft questionnaires
 - Provide relevant background documents to the Team
 - Draft budget and discuss contractual obligations with the Team
 - Overall responsibility for the supervision and implementation of the studies
 - Appoint the Regional Coordinator and the ACP Local Consultants
 - Bear the agreed costs of expenditure in respect of the evaluation (economy class tickets for approved visits to CTA's Headquarters, hotel accommodation and subsistence allowances during briefing meeting, or during agreed and specified field visits)
 - In conjunction with the Regional Coordinator, prepare the overall report taking into account the findings and recommendations of all the Pacific country reports (table of contents to be agreed by 31/01/04).
-

ANNEX 2: COUNTRY PROFILE

2.1 General Agricultural Profile

2.1.1 Size of agricultural population

Number of persons in agriculturally active households, by age group and location of household:

Location of Household	Total by Age Group			
	Total	Under 15	15-64	65 & Over
Rarotonga	3,096	888	2,072	136
Aitutaki	1,321	518	739	64
Mangaia	695	257	362	76
Atiu	443	124	294	25
Mauke	476	209	236	31
Mitiaro	196	82	97	17
Palmerston	0	0	0	0
Pukapuka	586	235	344	7
Nassau	71	10	59	2
Manihiki	114	36	73	5
Rakahanga	81	22	53	6
Penrhyn	0	0	0	0
Total	7,079	2,381	4,329	369

(Source: Cook Islands 2000 Census of Agriculture & Fisheries)

Number of persons in agriculturally active households, by gender, age group and location of household:

Location of Household	Male by Age Group				Female by Age Group			
	Total	Under 15	15-64	65 & Over	Total	Under 15	15-64	65 & Over
Rarotonga	1,641	492	1,071	78	1,455	396	1,001	58
Aitutaki	682	274	369	39	639	244	370	25
Mangaia	346	133	173	40	349	124	189	36
Atiu	222	51	156	15	221	73	138	10
Mauke	253	114	123	16	223	95	113	15
Mitiaro	110	49	51	10	86	33	46	7
Palmerston	0	0	0	0	0	0	0	0
Pukapuka	291	121	167	3	295	114	177	4
Nassau	38	7	30	1	33	3	29	1
Manihiki	66	21	42	3	48	15	31	2
Rakahanga	45	13	29	3	36	9	24	3
Penrhyn	0	0	0	0	0	0	0	0
Total	3,694	1,275	2,211	208	3,385	1,106	2,118	161

(Source: Cook Islands 2000 Census of Agriculture & Fisheries)

2.1.2 Land Use

The Cook Islands can be divided into three agricultural groups, as follows:

- (i) Rarotonga, which is richly endowed with arable land.

- (ii) Other Southern Group islands (Aitutaki, Mangaia, Atiu, Mauke and Mitiaro) which in total have significant arable land resources.
- (iii) Northern Group islands (Pukapuka, Nassau, Manihiki, Rakahanga, Penrhyn, Suvarrow and Palmerston) which are low-lying coral atolls with extremely limited land resources and coconut trees being the primary vegetation. They are in stark contrast to the Southern Group islands (including Rarotonga) which are primarily high volcanic islands with generally lush tropical vegetation and account for 90% of the total land area of the country.

Distribution of Arable Land (ha)

Region	Total Land	Arable Land	Class 1 Land	Class 2 Land
Rarotonga	6,600	2,100	1,500	600
Southern Is (ex. Raro)	14,400	9,000	2,300	6,700
Northern Islands	2,400	2,400	0	2,400
Total	23,400	13,500	3,800	9,700

(Source: *Agriculture in the Cook Islands: New Directions, 1993*)

Arable land in the Cook Islands is classified into two categories. Class 1 land is suitable for cash and subsistence crops, including vegetables. Class 2 land is suitable for tree crops only. As shown in the table, all Class 1 land in the country is contained in the Southern Group islands (including Rarotonga), and 20% of arable land is classified as Class 1. A high proportion of arable land is not available for agriculture. The 1988 Agriculture Census indicated the total area of agriculture production at 2,800 ha (including fallow and Government land holdings used for agriculture), representing 20% of all arable land. By the year 2000 this has fallen to 2,390, the fall being attributed to non-agricultural use, mainly private and commercial buildings construction, sports fields and other recreational uses.

2.1.3 Planted Forests

The forestry programme was started in 1987 with technical and financial assistance from New Zealand. The primary objective of the programme was to minimise soil erosion. On Atiu, Mangaia and Rarotonga Acacia trees were the main species considered initially for replanting because of its ability to fix nitrogen and improve soil quality. However, later it was left out of the programme because of its vulnerability to wind damages, sea sprays and diseases.

Planting continued using *Pinus caribaea* var *hondurensis* as the main species. This species performed better, establishing on infertile soils with limited problems. It also exhibited desirable characteristics like single leaders, good form, good branching characteristics and very high growth rates.

The plantation forest today covers 1,100 hectares (2,700 acres). Approximately 95% of these are planted in *Pinus caribaea*.

However, due to the economic reform programme of the country in 1995/96, the forestry programme unfortunately became a victim of the expenditure reductions. Meantime, there is no more forestry division in the Ministry. The planted trees have been handed

back to the land owners to manage with the assistance of the island councils. The Ministry's current role in this area focuses on technical advice. The Ministry also facilitates the German-funded agroforestry awareness programme implemented through SPC (SPC/PGRFP) which concentrates on capacity building and empowering the communities to take full responsibility of their flora and land resources.

2.1.4 Fishing Areas

The country's Exclusive Economic Zone (EEZ) totals 2 million square kilometres of the South Pacific Ocean, one of the largest amongst the small island states and on a per capita basis. Of this, 12 miles around each island have been set aside for the exclusive use of local fishermen for both home consumption and local sales, i.e. no licensed international shipping vessel is allowed to fish inside this area. Local fishermen make the most of this area for almost all of their fishing activities, including the lagoons.

This means the rest of the country's EEZ can be fished by anybody, provided they have been granted licenses to fish inside the EEZ; licensed foreign fishing vessels operating within the country's EEZ total 35. Over the years, unlicensed foreign fishing vessels have been caught and fined, thanks to surveillance assistance provided by New Zealand under an agreement between the NZ and Cook Islands Maritime Services.

The main areas where fishermen go as recorded in the 2000 Agriculture & Fisheries Census are; lagoon, reef, outside or over the reef, and freshwater. The main forms of fishing are; gill & other nets, vertical long lining, drop lining, hook & line, trolling, deep bottom, spear-gun, and collecting/gathering shells. Freshwater fishing is insignificant, being carried out on 4 islands and by only a hand-full of fishermen. This is related to the very small areas of fresh water reserves where fishing can be undertaken.

2.1.5 Agricultural systems

Both the 1988 and 2000 Agriculture Censuses used the same categorisation of farmers under the following 5 groups:

- (i) **Commercial producer** – the level of agricultural activity where a household's main purpose for production is to have its produce sold locally or export
- (ii) **Subsistence with cash cropping** – the level of agricultural activity where a household's main purpose for production is to feed itself with any surplus being sold
- (iii) **Subsistence only** – the level of agricultural activity where a household produces crops but does not sell for any significant amount
- (iv) **Minor agricultural** – the level of agricultural activity where a household has only very few crops defined as less than 625 square yards (1/8 of an acre) of land under garden crops or less than 10 coconut trees or less than 10 trees bearing other tree crops
- (v) **Non-agricultural** – the level of agricultural activity where a household does not engage in any crop production. Such households may own or look after land not in use and also own or look after livestock.

The 2000 report stated that there were 3,646 households in the country, 1,697 households (47%) were considered as agriculturally active. The remaining 53% were classified as minor agricultural households (29%) and non-agricultural (24%).

Of the agriculturally active households, a little over three quarters (76%) were dependent on agriculture subsistence only, while 15% were classified as subsistence with some cash cropping with the sale of agricultural produce by these households being of

secondary importance. The remaining 9% were classified as commercial producers as the sale or export of their produce was the primary intention of their agricultural activity.

On a regional basis, 74% of households on other southern islands were classified as agriculturally active compared to 43% on the northern islands and 35% on Rarotonga. This difference in agricultural activity between the regions is explained by the much greater diversification of the economy on Rarotonga particularly in the trade, tourism and service sectors and on the northern islands, a dramatic shift to cultured black pearl farming, particularly on Manihiki, Penrhyn and recently Rakahanga.

On the mainland Rarotonga, it is quite common for crop producers to also keep livestock, mainly pigs and poultry for home consumption, and do fishing. This is the case as well in the outer islands but with a much higher proportion who fish. So it is not surprising to hear farmers talking about horticulture as well as fishing at the same time; in the case of the Cook Islands the two go hand-in-hand, just like bread and butter.

Almost all farmers plant more than one crop, i.e. there is no farmer specialising in just one crop. For livestock farmers, apart from the handful of commercial piggeries and 2 poultry farmers, all other farmers also plant crops as mentioned above. So mixed cropping is the norm in Cook Islands agriculture.

Due to the increased rate of building construction on Rarotonga, a lot of the good prime agricultural land have been taken over – and most likely lost forever as far as agriculture is concerned. Although the Land Use Act of 1969 was meant to zone land according to use, it did not have the power to halt the transfer of land from agriculture to non-agricultural use. This is a pity because this will have implications on the ability of the mainland to produce in the future. On the other hand, this opens up opportunities for the southern islands, where land is still plentiful thanks to out-migration, to plant and supply Rarotonga.

2.1.6 Agriculture in the economy

Agriculture in the Cook Islands is very much a family affair and a fundamental sector of the Cook Islands economy. Indeed, the very concept of “growing your own food” is an inherent part of the culture and heritage of the country, and a matter of pride (even a near religious imperative) to Cook Islanders.

Yet the agriculture sector has undergone tremendous changes in the last 50 years. This transformation saw the Cook Islands economy move from one totally involved and dependent on subsistence agriculture, to one geared towards the promotion and commercial production of tropical fresh product exports to New Zealand in the 25 year period after World War II. Commercial agricultural production peaked in 1970 at over 10,000 tonnes (citrus, pineapple, banana, copra), and agriculture exports contributed around 66% of total export earnings.

Since 1970, there has been a long-term decline in commercial agriculture production, and by 1990 this was less than 2,000 tonnes and less than 20% of export earnings. This decline has continued to the present day, and the Cook Islands has many legacies of its past heavy commitment to commercial export agriculture.

Nevertheless, agriculture is a key element of Government’s economic growth strategy in the context of the Economic Restructuring Program (ERP) which commenced in mid 1996. Five key economic sectors have been identified, namely:

- Tourism
- Agriculture
- Marine resources
- Offshore financial services
- Local industry and services

(Source: *Agriculture in the Cook Islands: New Directions, 1993; Budget Policy Statement, 2003*)

Agriculture is still the main activity in the southern islands with the exception of Rarotonga where trade, tourism and the service-related sectors are the main sources of income. For the northern islands, pearl farming, subsistence fishing and home gardening predominate. For the country as a whole, agriculture and fisheries are the principle productive sectors of the economy, contributing an estimated 15.2% (at average 1990 prices) of the country's GDP in 2000 (*Cook Islands 2000 Census of Agriculture & Fisheries*).

Main and secondary agricultural produce

Main agricultural produce		Market	
		Local	Export
FRUITS	Pawpaw, banana, breadfruit, coconut, citrus, pineapple, mangoes, avocado, noni	All except noni and pawpaw	Noni (mainly Japan) Pawpaw (NZ only)
ROOTCROPS	Taro, tarua, sweet potato, cassava	All	Taro, tarua, cassava are exported on an irregular basis to NZ
VEGETABLES	European (head) cabbage, Chinese cabbage, tomato, capsicum, lettuce, sweet corn, beans, watermelon, cucumber	All	Some beans are exported to NZ on an irregular basis
OTHERS	Maire leis	None	Exported weekly to Hawaii
Secondary agricultural produce			
FRUITS	Litchi, carambola, macadamia, coffee, chestnut	All	None
ROOTCROPS	yam, turmeric, ginger	All	None
VEGETABLES	carrot, chilli	All	Small quantities of chilli are exported to NZ
OTHERS	a range of herbs for medicinal and food flavouring purposes	All	None

2.1.7 Trade agreements that include agriculture

- COOK IS/NZ BQA – an agreement allowing selected products (beans, banana, chilli, pawpaw, mango, rootcrops, coconut) to be exported fresh to NZ after prescribed non-chemical treatment and/or inspection methods. The agreement allows such products to enter NZ without fear of these products being dumped, unless the treatment and/or inspection methods have not been effectively followed.

- PICTA – an agreement intended to promote free trade amongst the Forum Island Countries of the Pacific over a period of time. This agreement is still in its infancy stage so that it is not yet clear how it will benefit the agriculture and marine sectors of the country.
- PACER – an agreement intended to promote trade and economic cooperation but it is not a free trade area as it does not require reduction and elimination of tariffs. However, it does provide for negotiations on a Forum-wide free trade area. Like PICTA, PACER is still in its infancy stage so that it is not yet clear how it will benefit the agriculture and marine sectors of the country.

2.1.8 Sectoral policy related to:

AGRICULTURE

The VISION of the Ministry of Agriculture is to ensure that the highest possible level of benefits from agriculture accrues to the community.

The MISSION of the Ministry of Agriculture is to maximise exploitation of the potential in agriculture to advance the economic, social and environmental aspirations of the country in accordance with the principles of comparative advantage, through the application of agricultural technology and high standards of professionalism (*Source: MoA budget submission, 2003*).

Agriculture's 5-point strategy is as follows:

I Intensification Strategy

1. Cropping area and intensity expansion
2. Crop yield increase
3. Livestock and poultry up-grading, expansion and productivity increase

II Diversification Strategy

1. Food crop diversification
2. Promotion of high value crops
3. Development of agro-forestry on sloping lands
4. Development of goat and other livestock farming
5. Development of feed crops

III Strategy for Sustainable Commercial Agriculture Development

1. Intensive commercial crop production with the application of advanced agricultural and irrigation practices
2. Organic farming and application of bio-technology (EM, GMO) and IPM technology
3. Development of integrated farming practices

IV Post-harvest and Processing Facilities Development Strategy

1. Packaging sheds which include facilities for cleaning, sorting, grading, packing and storage (both conventional and cold storage) and processing of fruits and vegetables

2. Triple “A” slaughterhouses and cold storage facilities together with meat processing facilities
3. Establishment of small-scale feed mills to produce blended feed using imported and locally available ingredients

V Institutional and Behavioural Development Strategy

1. Development of private commercial agriculture and livestock farming based on individual oriented but horizontally integrated producers associations, grouping in accordance with their choice of crops or livestock with comparative advantages (technical, economic and agro-ecological)
2. Development of diversified consumption and dietary patterns with increased awareness on health and nutrition
3. Development of agricultural marketing and market information systems through better cooperation between government agencies and private sector operators in order to upgrade and further expand existing markets and develop new domestic and international market opportunities
4. Establishment of a 'national extension network' under MoA with systematic linkages with outer islands administrative bodies

MoA's National Agriculture Strategic Plan (2001) from which the above has been extracted, gives a detailed strategic plan matrix outlining the necessary work-plans and activities for the achievement of the above strategy.

As part of the country's economic reform of 1996, accrual accounting was introduced which required all Government agencies to identify deliverable outputs on an annual basis. To this end, MoA's 4 outputs as stated in the 2003/04 Government Appropriation Bill (Budget) were as follows:

Output 1: Economic progress – Improve income levels of the country, especially commercial agricultural organisations and individuals, through the application of improved agricultural technology and information. A major task towards this end is the protection of existing and future incomes through risk management.

Output 2: Social advancement – Promoting self-reliance and advancement through capacity building and community partnerships. This refers to extending/strengthening the Ministry's knowledge and the demonstration of its effectiveness to the farming community. Perceived benefits include; enhancement of livelihoods and subsistence resources, promotion of healthy lifestyles, and shared responsibility for maximising the socio-economic benefits due to sound agricultural practices.

Output 3: Environment sustenance – Ensure sustainability of agriculture development and the maintenance of environmental quality through the management of pests, diseases, and boarder control measures, as well as the promotion of environment-friendly crop and livestock production and management practices.

Output 4: International links – Maximising benefits to Cook Islands agriculture by strengthening and maintaining international links through the exchange of information and knowledge, and securing foreign resources (financial and technical) to supplement local resources aimed at facilitating agricultural development initiatives.

Under each of the above outputs, detailed work-plans, results and measures are outlined.

(Source: Government Budget 2003/04)

FISHERIES

The objective of the Ministry of Marine Resources (MMR) is to ensure the sustainable development of the living and non-living marine resources for the benefit of the Cook Islands. By “resources” it means species of edible, cultural or potential value that inhabit or use our waters. By “sustainable development” it means that generations to come should be able to enjoy and subsist on the marine environment just as we do today, with all its animals, plants and structures.

The main objectives of the Economic Development Section of MMR are:

- To increase self-sufficiency in food and protein production from the ocean at affordable prices at both the household and national level;
- To maximise development in areas offering the greatest potential for import substitution and foreign exchange earnings; and
- To implement proper conservation measures of marine resources to ensure sustainable development of the industry.

The section is responsible for:

- Managing the fish aggregate device (FAD) programme from the planning stage right up to deployment and maintenance;
- Monitoring catch rates of tuna and other pelagic fish to evaluate the efficiency of FADs;
- Running marine workshops and training on a variety of subjects; and
- Providing technical advice (and limited involvement) when organisations or individuals are considering exploiting a resource.

The Research Section develops and conducts research programmes that focus on responsible and sustainable management of marine resources.

Lagoon monitoring – this includes environmental monitoring of the pearl culture industry, including water quality, pearl oyster health and growth, pearl farm mapping and census. It also involves baseline surveys and monitoring of the fish, corals and invertebrates of various islands.

Ciguatera programme – MMR monitors the lagoon around Rarotonga for outbreaks of ciguatera several times a year and informs the public about areas that should not be fished.

Marine reserves – the Research section monitors the results of the Rarotonga marine reserves (raui) that have been put in place by the community elders. The section encourages and offers advice to the outer islands regarding marine reserves and conservation matters. They are responsible for research on subsistence fishing activities, public awareness of the raui areas and activities of MMR, and offering technical advice.

The goal of the Policy and Resource Management Section is to set policy guidelines for the marine sector. This involves ministerial activities and communication with other government ministries on policy issues related to the pearl industry, inshore fisheries, offshore fisheries, and offshore minerals; in other words, all facets of the work programme currently being undertaken by MMR.

The Ministry works closely with other Government departments (e.g. with Health and Agriculture on Codex, Environment on reserves, Police on illegal fishing vessels) and also with international organisations. The latter includes; FFA, SOPAC, and SPC.

(Source: Ministry of Marine Resources Cook Islands, 2000; Government Budget 2003/04)

In its budget of 2002/03 and 2003/04, MMR had 5 outputs to deliver;

Output 1: International/legal – to strengthen the policy and legal capacity of the Ministry to ensure the proactive participation in local, regional and international fisheries initiatives.

Output 2: Inshore fisheries & aquaculture – to facilitate the sustainable development of the pearl industry and the diversification, growth and sustainable management of the inshore fisheries sector.

Output 3: Offshore fisheries – to encourage growth in the local offshore fisheries sector whilst promoting sustainable and regionally compatible fisheries management regime that also includes the monitoring, control and surveillance of the EEZ.

Output 4: Extension & services – to provide relevant fisheries related training to increased the knowledge and skills of local fishermen and to develop an observer regime that meets regional standards.

Output 5: Corporate services – to provide senior management with accurate financial information, efficient and effective managerial support.

As is the case with MoA, under each of the above outputs, detailed work-plans, results and measures are outlined.

(Source: Ministry of Marine Resources Annual Report 2002/03, Government Budget 2003/04)

FORESTRY

Purpose

The purpose of the National Forest Policy (NFP) is to provide information, directions and guidelines concerning the management and sustainable utilisation of the country's forests or forest based resources for the protection of the environment, social advancement and economic development.

Goal and Definitions

The goal of NFP is to enhance the environmental, social and economic values of the nation's forests and ensure that their protection, management and utilisation will sustain those values for future generations.

Environmental values are:

- The provision of habitat and safeguarding of biodiversity in plants and animals and the full genetic complement of species that depend on the forest environment.
- Watershed and land protection that prevents degradation of soil, resources, streams, farmland and coastlines.

Social values are:

- Food and life sustaining values, especially water quality.
- Protection from wind, sun and cyclonic storms.
- Recreational opportunities, for humans and experience of the natural environment.

Economic values are:

- Timber products.
- Non-timber forest products of food, handcraft, medicinal, landscape, fragrant and decorative value.
- The enhancement of the natural environment that contributes to the quality of life for Cook Islanders and gives the islands appeal for tourism development.

Objectives

To achieve the goal of NFP it is necessary to define clearly the objectives and implementation programme of such a policy. These objectives are as follows:

Objective 1

To manage and protect the forests in a manner that is acceptable, sustainable and in line with the forests defined and required functions as determined by the local community.

Forests provide for multiple functions. Identification and categorising of forest functions relative to location and community needs is required. It would then be possible to develop legislation supported by implementation guidelines to ensure the achievement of specified functions.

The interior natural forest of Rarotonga, for example, needs to be maintained and logging should not be permitted under any circumstance. Removal of dead wood for fuel and minor construction may be allowed but this must be done with care. The main functions of the Rarotonga forest should primarily be watershed protection, conservation and landscape.

Objective 2

To stimulate and encourage community interest and participation in economic development activities related to the wise use of forest and resources derived from them. The utilisation of the forest resources should follow sustainable development principles.

This objective relates to the management and sustainable utilisation of forest resources, both in the natural forest and plantation forest. Participation of the resource owners will enable the resources to be utilised in a way that is transparent and while geared to meet the needs of the developer must also maintain the values ascribed by the local community.

Objective 3

To encourage and stimulate training activities and develop dialogue with resource owners on the need to sustainably protect, manage, and promote the forest resources.

This objective is concerned with creating awareness in forest owners of the need to safeguard forest resources, promote protection of those resources and ensure that the skills are available for development of the resources on a sustainable basis.

Objective 4

For MoA to provide support through provision of research and advice on matters regarding the sustainable use of forest resources.

This objective is concerned with the executing MoA function in development and utilisation of forest resources in order to promote and facilitate development of the forestry sector in the country.

(Source: National Forest Policy, 1997)

However, as mentioned earlier in this section, due to the economic reform programme of the country in 1995/96, the forestry programme unfortunately became a victim of the expenditure reductions. Meantime, there is no more forestry division in the Ministry. The planted trees have been handed back to the land owners to manage with the assistance of the island councils. The Ministry's current role in this area focuses on technical advice. The Ministry also facilitates the German-funded agroforestry awareness programme implemented through SPC (SPC/PGRFP) which concentrates on capacity building and empowering the communities to take full responsibility of their flora and land resources.

2.2 Socio-economic Profile

2.2.1 Population by Island/Region and Age Group

Island/region	Total	<15	15-44	45-59	+60
Total	18,027	5,415	8,064	2,630	1,918
Rarotonga	12,188	3,264	5,776	1,906	1,242
Southern Group	4,013	1,420	1,504	563	526
Aitutaki	1,946	646	796	280	224
Mangaia	744	261	266	103	114
Atiu	623	232	215	87	89
Mauke	470	192	154	67	57
Mitiaro	230	89	73	26	42
Northern Group	1,826	731	784	161	150
Palmerston	48	19	18	3	8
Pukapuka	664	304	259	44	57
Nassau	72	40	25	4	3
Manihiki	515	171	263	56	25
Rakahanga	169	57	64	25	23
Penrhyn	357	140	155	29	33
Suvarrow	1	0	0	0	1

(Source: Cook Islands Population Census Preliminary Results, 2001)

2.2.2 Population by Island/Region and Gender

Census Year	Cook Islands		Rarotonga		Percentage Distribution	
	Male	Female	Male	Female	Rarotonga	Outer Islands
1936	6,376	5,870	2,649	2,405	41	59
1945	7,185	6,903	2,879	2,694	40	60
1951	7,827	7,252	3,211	2,837	40	60
1956	8,695	7,985	3,805	3,407	43	57
1961	9,454	8,924	4,470	4,206	47	53
1966	9,749	9,498	5,047	4,924	52	48
1971	10,910	10,413	5,917	5,561	54	46
1976	9,294	8,834	5,080	4,722	54	46
1981	9,109	8,564	4,933	4,597	54	46
1986	9,188	8,426	5,143	4,683	56	44
1991	9,697	8,920	5,619	5,267	59	41
1996	9,842	9,261	5,730	5,495	59	41
2001	9,303	8,724	6,263	5,943	68	32

(Source: Cook Islands Population Census Preliminary Results, 2001)

2.2.3 Literacy level and languages

The literacy level is relatively high, with 95% of the total population being able to read and write. Cook Islands Maori is the local language, spoken by all of the native Cook Islanders. Each of the 11 inhabited islands have their own local dialect, but everybody understands Cook Islands Maori. English is the second language which upwards of 75% of the total population can speak and write. English is also commonly used as the business language in both Government and the private sector. With English catching up quite fast and even threatening the survival of the local language, Government has made it mandatory that the local language be taught in the schools and even gone to the extent of legislating it; Te Reo Maori Act (the local language act) was passed by Parliament on 1 July 2003.

2.2.4 Access to services (health, schools, electricity)

Health is available free of charge to all pre-school, primary and secondary school age students, the handicapped, and pensioners. However, patients will have to pay for their medication if secured from the private sector pharmacies. The rest of the population (i.e. the economically active) have to pay for medical attention. There is a standard consultation fee of \$5 each time a visit is made to the Public Hospital. Medication, if any, pumps up the cost. Private sector GPs charge on average \$20 consultation fee. Medication, if any, pumps up the cost.

Attendance at school until the age of 15 is compulsory by law. Primary and secondary school are readily available on most islands. Apart from the Teachers Training College and the Takamoa Theological College, all tertiary education has to be taken off-shore. Most funded scholar shippers are sent to Fiji, while some manage to take up awards in NZ, Australia and Vanuatu (the latter, at the USP School of Law).

The bulk of the electricity is powered by imported diesel. Rates are \$0.49/unit for commercial use, and 3 different rates (23cents, 40cents and 49cents per unit, depending on the consumption and number of days) for private use. Alternative energy sources

(solar, gas) are increasingly becoming important, due to their lower per unit costs and the general world-wide movement away from fossil to non-fossil fuel source.

Of the country's 11 inhabited islands, 9 have regular supplies of electricity; 8 are powered by diesel and 1 by solar. On the two islands with no electricity (with a combined population of around 1%), some residents have portable generators. Other sources of energy used are petrol (for motor vehicles and outboard motor boats), kerosene and/or gas for cooking. Government has plans for these two islands to eventually have electricity.

2.2.5 Rural urban drift

Population decline is a serious problem facing the country since 1971, the year the country's highest population was recorded at 21,322. Since then, the population has remained under 20,000, with an estimate by the Government Statistics Office of the resident population at the end of 2003 of 13,900 (total population including non-residents equal 18,027).

Since the upgrading and opening of the Rarotonga International Airport in the early 1970s, net out-migration has been the norm. People migrate for many reasons, the two main ones being economic (in search of employment opportunities or better wages to what was available locally), and education (for both adults/parents and their children). A significant proportion of those travelling abroad for other reasons (e.g. medical, and training/study awards, also decide not to come back, thereby adding to the loss of residents.

The country's economic reform in 1995/96, which saw the reduction in the size of the public sector by 60%, also had a major impact on the size of the local population. Most of those laid off decided that migration is the better option. The outer islands were hard hit by the reform, with 5 outer islands (Atiu, Penrhyn, Rakahanga, Nassau and Mangaia) registering upwards of 30% reduction in their island populations.

In the context of the Cook Islands, rural-urban drift means the movement of people away from the outer islands to Rarotonga which is the gateway to the outside world, and from Rarotonga to New Zealand and Australia. Limited numbers move across to French Polynesia and the West Coast of the United States.

Because of the rural-urban drift and the resulting decline especially in the economically active category of the population, labour shortage has become acute right across the board, both in Government and particularly private sector. The latter have had to import workers (mainly from Fiji) to meet the labour shortage, especially in the tourism and hospitality industry.

If not adequately addressed, the rural-urban drift and the resultant importation of foreign workers, will lead to important social and economic problems in the future.

2.3 Media and Telecommunications

2.3.1 Newspapers, periodicals and broadcast media

- Cook Islands News – published daily except Sundays and public holidays; private sector owned; circulation = 1,800 from Mondays to Fridays, and 2,000 on Saturdays; 10% goes to the outer islands. Apart from the CTA-funded fortnightly column of 250 words on agriculture, there is no regular programme with a focus on agriculture and rural issues. Other than the CTA-funded programme, on average there is a write up

or some news article concerning agriculture about twice a month, some of these articles are actually provided by the Ministry in the interest of the public. Outlets are small shops and supermarkets, and individual subscribers. The paper is available on the internet at www.cookislandsnews.com.

- Cook Islands Herald – published weekly, private sector owned, circulation = 2,000; less than 10% goes to the outer islands; on the web at www.ciherald.co.ck. The CTA-funded fortnightly column of 250 words on agriculture in the Cook Islands News is also published in the Cook Islands Herald fortnightly but on alternative fortnights; there is no regular programme with a focus on agriculture and rural issues apart from this. Other than the CTA-funded programme, on average there is a write up or some news article concerning agriculture about once a month. Outlets are small shops and supermarkets, and individual subscribers.
- Cook Islands Times – published weekly, private sector owned, circulation = 1,500; less than 10% goes to the outer islands; same owner as Cook Is Herald. Outlets are small shops and supermarkets, and individual subscribers.
- The Independent – published weekly, private sector owned, circulation = 1,500; less than 10% goes to the outer islands; same owner as Cook Islands Herald. Outlets are small shops and supermarkets, and individual subscribers.
- Radio Cook Islands – nation-wide radio station, used a lot by both Government and the private/business sector for their respective agendas; runs from 6.00am – 11.00pm; previously owned by Government, now wholly private sector owned. Agriculture has two programmes with the station; the CTA-funded weekly 5-minutes programme, and the monthly 1-hour talk-back programme.
- Radio Ikurangi – an FM radio station that serves Rarotonga only. Because of its limited coverage, its use for community purposes is also limited. Nevertheless, people still use it for advertisements, especially when the target audience or clientele (of the ads) is confined to Rarotonga; private sector owned. Broadcast times are the same as for Radio Cook Islands.
- Cook Islands Television – the only TV station in the country; private sector owned. The Ministry has two CTA-funded TV programmes; 3 x 30-seconds spot advertisements per week (mainly on quarantine), and a monthly 30 minutes presentation where pre-recorded video tapes on selected agriculture topics are shown (some of the tapes are produced by IRETA with funding from CTA). TV broadcast times are 5.00pm – 11.00pm for local programmes, and from 11.00pm to the early hours of the next morning the station hooks up to international stations like ABC, BBC and CNN. Coverage is for Rarotonga only, with recorded tapes of the previous night's show sent to the outer islands the next day. On some of the southern islands, they have their own little TV stations run by private sector business operators and/or the island administrations. The TV is used widely by both Government and the community for notices, advertisements and news updates.
- A number of NGOs and Government agencies also issue newsletter-type releases targeting a more specific clientele, e.g. Te Nui Evangelia, a quarterly newsletter by the Cook Is Christian Church, and Te Kura, a quarterly newsletter by the Ministry of Internal Affairs

Apart from the Cook Islands Times (printed in NZ), all other newspapers are printed in the Cook Islands in both the local and English languages. Except for articles, advertisements or releases on agriculture, all other materials printed in the above papers are not related to agriculture. So therefore the proportion of agriculture-related materials printed by them can be nil, negligible or minimal. There are no other publishing houses/units producing other information products.

There are 4 printers in the country, owned by Cook Islands News, Cook Islands Herald (these are for printing newspapers only), Cook Islands Printing Services and Rarotonga

Printing Services. The latter two print most of the printing requirements of the country. Others send their printing to be done overseas (mainly NZ).

2.3.2 Telecommunication services

Telecom Cook Islands – an ad hoc company jointly owned by the Cook Islands Government and Telecom New Zealand – and runs the country's telephone, facsimile and email services. No other telecommunications company operates in the country, although several potential operators have held discussions with Government over the last 7 years with the purpose of introducing services to compete with the existing company.

Telecom charges NZ\$0.15 for every ten minute increment when using telephone to dial a local or fixed phone. Mobile or cellular call charges are dependant on the rate plan selected by the user. Rate plans included the following:

EVERYDAY PLAN: Monthly, \$60.00
Peak-rate/minute, \$0.60
Off peak-rate/minute, \$0.60
Text message, \$0.20

LIFESTYLE PLAN: Monthly, \$35.00
Peak-rate/minute, \$1.10
Off peak-rate/minute, \$0.35
Text message, \$0.20

PREPAID: Monthly access, \$0.00
Peak-rate/minute, \$1.99
Off-peak rate/minute, \$1.99
Text message, \$0.20

Peak-rate is between the hours of 7am to 6pm, off peak-rate is between the hours of 6pm to 7am.

International call rates are charged by the minute and vary depending on the destination of the call. Please refer to our customer services section on phone 123 to price the call to your preferred destination.

Number of subscribers of fixed phone networks: Telecom Cook Is says that "it is safe to say that almost all private dwellings and businesses on Rarotonga own a telephone". According to the 2001 population census, total occupied dwellings total 4,041, made up of private dwellings (3,880) and non-private dwellings (161).

Regarding phone networks, all inhabited islands are hooked up, from the smallest of Palmerston (resident population of 49 with one phone line and fax at the local Telecom Station), to Rarotonga (resident population of 9,424).

With the mobile or cellular network, just over 2,000 users have registered and this figure increases each day.

Oyster is the Cook Islands only Internet Service Provider and provides real-time access to a range of internet services. The number of subscribers has passed the 2,000 mark at the time of contact with Telecom Cook Islands.

Costing for internet access again is dependant on the monthly plan selected, which includes the following;

STANDARD:	Monthly, \$20.00 Usage after 4 hours is chargeable at \$7.00/hr
PREPAY1:	Monthly, \$60.00 Usage after 15 hours is chargeable at \$5.60/hr
PREPAY2:	Monthly, \$120.00 Usage after 50 hours is chargeable at \$3.35/hr

Registration is \$25.00

(Source: personal communication with Telecom Cook Islands)

2.3.3 Computers

As at the end of 2001, there were 849 computers in the country, 90% (762) on the mainland Rarotonga (*Population Census, 2001*). With a resident population of 13,900, this equates to 61 computers per 1,000 people. At the beginning of 2004, this is estimated to have increased by 25% to 76 computers per 1,000. This estimated increase can be attributed to more users using email as means of communication, in addition to Government and non-government offices using computers for their businesses.

There are about 5 private sector companies trading in computers (importers & retailers) with full back-up maintenance and repair services. A couple also provide training on specific packages for all levels (introductory courses for beginners, middle level users, advanced packages).

2.3.4 Means of disseminating information to users

The main channels of disseminating information to the end users in the rural sector are as follows:

Farmers

Printed material – flyers, brochures, handouts, booklets, posters; these are handed out during workshops or field days, put up in easy-to-see places for posters, or farmers pick them up when visiting the agriculture offices on each island. Most of these printed materials are out-dated and need to be updated.

Field demonstrations – these are field days organised by MoA on its properties or on the properties of farmers, to highlight aspects related to crop and livestock production and management.

TV/radio – these are used extensively by MoA through a programme presently funded by MoA (see **Annex 2.3.1** above).

Fishermen

Printed material – flyers, brochures, handouts, booklets; these are handed out during workshops, or fishermen pick them up when visiting the fisheries offices on each island.

Field demonstrations – these are field days organised by MMR in one of its research/breeding stations to highlight aspects related to fisheries and pearl farming.

TV/radio – these are also used by MMR but not as extensively as in the case of MoA.

ANNEX 3: PROFILE OF INSTITUTIONS

3.1 Institutions Involved in Agriculture and Rural Development

Name and contacts	Type	Role
GOVERNMENT AGENCIES		
Nga Mataio Secretary, Ministry of Agriculture P.O. Box 96, Rarotonga Phone: 28711, Fax: 21881 Email: cimoa@oyster.net.ck	GOV	EX, IN, PP, RD, RG crops & livestock
Vaine Teokotai Secretary, Ministry of Health P.O. Box 109, Rarotonga Phone: 29664, Fax: 23109 Email: aremaki@oyster.net.ck	GOV	RG meat inspection at abattoir, takes part in MoA organised home gardening workshops
Ken Matheson Secretary, Ministry of Education P.O. Box 97, Rarotonga Phone: 29357, Fax: 28357 Email: cieducat@oyster.net.ck	GOV	TR syllabus on agriculture is jointly implemented by Agriculture and Education
Mii Rairi Manager Dept. of National Human Resources Dev. P.O. Box 650, Rarotonga Phone: 21467, Fax: 21468 Email: nathrd@oyster.net.ck	GOV	TR agency is involved in coordinating long-term training programmes
Nandi Glassie Chief Executive Officer Office of the Minister for Island Administration (formerly, Ministry of Outer Is Dev.) P.O. Box 383, Rarotonga Phone: 20321, Fax: 24321 Email: mglassie@omia.gov.ck	GOV	IF – infrastructure (water, roads, wharves, electricity)
Island Administrations on each of the outer islands: Aitutaki Ph: 31007, Fx: 31622 Sabati Solomon, Island Secretary Mauke Ph: 35200, Fx: 35201 Tai Tura, Island Secretary Atiu Ph: 33269, Fx: 33369 Charles Koronui, Island Secretary Mangaia Ph: 34289, Fx: 34238 Tuaine Tuara, Island Secretary Mitiaro Ph: 36108, Ph: 36141 Teokotai Topa, Island Secretary Penrhyn Ph: 42100, Fx: 42116 Mii Mariri, Island Secretary	All GOV	IF – provider of infrastructure, including their maintenance LA – provider of additional labour to help out agriculture projects as the need arises

Name and contacts	Type	Role
Manihiki Ph: 43103, Fx: 43680 <i>Solomona Toroma, Island Secretary</i> Pukapuka/Nassau Ph: 41711, Fx: 41712 <i>Tai Ravaroa, Island Secretary</i> Rakahanga Ph: 44036, Fx: 44035 <i>Turuta Temu, Island Secretary</i> Palmerston Ph/Fx: 37683 <i>Tere Marsters, Island Secretary</i>		
Ata Herman Secretary, Ministry of Works P.O. Box 102, Rarotonga Phone: 20034, Fax: 21134 Email: info@mow.gov.ck	GOV	IF – provider of infrastructure, including their maintenance
Ian Bertram Secretary Ministry of Marine Resources P.O. Box 85, Rarotonga Phone: 28721, Fax: 29721 Email: rar@mmr.gov.ck	GOV	EX, IN, PP, RD, RG fisheries, pearls
Rairi Rairi Secretary Ministry of Internal Affairs P.O. Box 98, Rarotonga Phone: 29370, Fax: 23608 Email: accountf@intaff.gov.ck	GOV	EX, IN involvement is mainly with women
Marama Anguna Acting Manager Aid Management Division MFEM P.O. Box 3195, Rarotonga Phone: 29521, Fax: 29520 Email: temarama@projectaid.gov.ck	GOV	IN, FS division coordinates the disbursement of funds of some funding agencies
Kevin Carr Financial Secretary Ministry of Finance & Economic Management P.O. Box 41, Rarotonga Phone: 29511, Fax: 29651 Email: budget@mfem.gov.ck	GOV	IN, FS monitors the disbursement of government funds to agencies including Ag.
Edwin Pittman Secretary Ministry of Foreign Affairs & Immigration P.O. Box 105, Rarotonga Phone: 29347, Fax: 21247 Email: secfa@foraffairs.gov.ck	GOV	IN, PP, RG official contact and clearing house for funding agencies
Chris Wong Chief Executive Officer Cook Islands Tourism Corporation P.O. Box 14, Rarotonga Phone: 29435, Fax: 21435 Email: tourism@cookislands.gov.ck	GOV	IN, PP Works closely with Ag. in relation to tourism and food production

Name and contacts	Type	Role
Toti Tupa Director, Environment Service P.O. Box 371, Rarotonga Phone: 21256, Fax: 22256 Email: ipukarea@environment.org.ck	GOV	IN, RG some funded projects, e.g. biosafety, are jointly implemented by Ag. and Environment
Justina Nicholas Librarian, National Library Ministry of Cultural Development P.O. Box 8, Rarotonga Phone: 20725, Fax: 23725 Email: ipukarea@environment.org.ck	GOV	IN
Mark Short Chief Executive Officer Development Investment Board Private Bag, Rarotonga Phone: 24296, Fax: 24298 Email: markshort@cidib.gov.ck Web: www.cookislands-invest.com	GOV	IN, PP, RG, TM refers potential investors to Ag. for comments
PRIVATE SECTOR AGENCIES		
Unakea Kauvai Managing Director Bank of the Cook Islands Private Bag, Rarotonga Phone: 29341, Fax: 29343 Email: cash@bci.co.ck	BNK	FS
General Manager Westpac Banking Corporation Private Bag, Rarotonga Phone: 22014, Fax: 20802 Email: bank@westpac.co.ck	BNK	FS
General Manager ANZ Banking Corporation Private Bag, Rarotonga Phone: 21750, Fax: 21760 Email: anzcooks@anz.com	BNK	FS
William Hosking President Rarotonga Nita Growers Association Airport, Rarotonga Phone: 28912, Fax: none Email: info@tikiokirentals.co.ck	AS-F	PS-E, PS-S, TM buys, treats and exports pawpaw, and imports fertilisers and chemicals
Kura Guinea Director Maire Exporters Ltd P.O. Box , Rarotonga Phone: 20010, Fax: 20562 Email: verokura@oyster.net.ck	PRV	PS-E, TM

Name and contacts	Type	Role
Eugene Tatuava Managing Director Cook Islands Marketing Services Ltd Airport, Rarotonga Phone: 23361, Fax: 21391 Email: eugene@rarofreight.co.ck	PRV	PS-E, TM
Danny Mataroa Director, Cook Islands Premium Noni Ltd Avarua, Rarotonga Phone: 23956, Fax: 26955 Email: serfraro@oyster.net.ck	PRV	PS-E
Teava Iro Director, Cook Islands Noni Marketing Ltd P.O. Box 184, Rarotonga Phone: 23666, Fax: 25088 Email: gwen@oyster.net.ck	PRV	PS-E
Taura Tukaroa Manager, Sunline Exports Ltd Pue, Avarua, Rarotonga Phone: 22840, Fax: nil Email: helenta@oyster.net.ck	PRV	PS-E
Tapi Taio Managing Director, Taio Shipping Ltd Avatiu Wharf, Rarotonga Phone: 24905, Fax: 24906 Email: taio@taio.co.ck	PRV	TM internal transport provider
Ewan Smith Managing Director, Air Rarotonga Ltd Private Bag, Rarotonga Phone: 22888, Fax: 23288 Email: bookings@airraro.co.ck	PRV	TM internal transport provider
Rob Bullen Manager, CITC Supermarket Ltd Private Bag, Rarotonga Phone: 22777, Fax: 20857 Email: shop@citc.co.ck	PRV	TM major outlet for ag. produce
Brett Porter Managing Director, Meatco Ltd Private Bag, Rarotonga Phone: 27652, Fax: 24652 Email: cavelle@meatco.co.ck	PRV	TM major outlet for ag. produce
Robert Wigmore Manager, Wigmore Superstore Ltd Private Bag, Rarotonga Phone: 20206, Fax: 24206 Email: maryanne@oyster.net.ck	PRV	TM, PS-P major outlet for ag. produce

Name and contacts	Type	Role
John Wichman General Manager, Foodland Ltd Private Bag, Rarotonga Phone: 23378, Fax: 20882 Email: orders@foodland.co.ck	PRV	TM major outlet for ag. produce
David Bridge Local Manager, Air New Zealand Ltd Airport, Rarotonga Phone: 26301, Fax: 23300 Email: anatetevano@nz.co.nz	PRV	TM international carrier of ag. produce
FUNDING AGENCIES/SPONSORS		
Dr. Jimmy Rogers Deputy Director General SPC – Land Resources Division Private Mail Bag, Suva, Fiji Phone: 3370733, Fax: 3386326 Email: PlantProtectionService@spc.org.fj	REG	EX, IN, PP, RD, TR
Dr. Vili Fuavao Representative, FAO Sub-regional Office Private Mail Bag, Apia, Samoa Phone: 22127, Fax: 22126 Email: FAO-SAP@fao.org	REG	EX, IN, PP, RD, TR
Carl Greenidge Director, CTA Postbus 380, NL – 6700 AJ Wageningen The Netherlands Phone: 317467100, Fax: 317460067 Email: cta@cta.nl	REG	EX, IN, PP, TR
Mohammed Umar Director, IRETA USP Alafua Campus Private Bag, Apia, Samoa Phone: 22372, Fax: 222347 Email: uspireta@samoa.usp.ac.fj	REG	EX, IN, PP, RD, TR
Greg Urwin Secretary General Forum Secretariat Private Mail Bag, Suva, Fiji Phone: +679-331-2600, Fax: +679-331-2226 Email: jimg@forumsec.org.fj	REG	IN, PP, TR
Kurt Meyer High Commissioner (<i>manager of NZAID in the Cook Islands</i>) C/- NZ High Commission's Office Private Bag, Rarotonga Phone: 22201, Fax: 21241 Email: nzhc@raro.gov.ck	NZGOV	TR

Name and contacts	Type	Role
AGRICULTURAL INPUT SUPPLIERS		
Richard Reid Managing Director, R.J. Reid Ltd P.O. Box 466, Silverdale, Auckland, NZ Phone: 4443802, Fax: 4443306 Email: rick@rjreid.co.nz Web: www.rjreid.co.nz	PRV	PS-S
Managing Director Farm Services Ltd 17 Flexman Place, Silverdale, Auck, NZ Phone: 4279137, Fax: 4279138 Email: unknown	PRV	PS-S
Carol Price Director, Venture Exports Ltd P.O. Box 5724, Wellesley St, Auck, NZ Phone: 8263917, Fax: 8280094 Email: venture-exports@xtra.co.nz	PRV	PS-S
Manager Yates Vegetable Seeds Ltd 4 Henderson Place, Onehunga, NZ Phone: 6362858, Fax: 6362857 Email: unknown	PRV	PS-S
Tom Murphy Operations Manager Ravensdown Fertiliser Co-operative Ltd P.O. Box 608, Auckland, NZ Phone: 2371550, Fax: 2371559 Email: info@ravensdown.co.nz	PRV	PS-S
Paul Hooper Managing Director, Hooper Machinery Ltd 8 Henderson Valley Road, Auck, NZ Phone: 8385065, Fax: 8364031 Email: unknown	PRV	PS-S
General Manager Power Farming (Wholesale) Ltd P.O. Box 6, Morrinsville, NZ Phone: 8890815, Fax: 8895435 Email: binglis@powerfarming.co.nz	PRV	PS-S
Andrew Culley Sales Manager Seed & Field Service Ltd P.O. Box 962 Pukekohe Auckland, NZ Phone: 2371153, Fax: 2371154 Email: aculley@sfse.co.nz	PRV	PS-S

Name and contacts	Type	Role
General Manager Farmgard Equipment Company P.O. Box 13354, Onehunga, Auck, NZ Phone: 2755555, Fax: 2759692 Email: unknown	PRV	PS-S
Don Beer Jnr Managing Director, Beco Ltd Arorangi, Rarotonga Phone: 21525, Fax: 21505 Email: beco@oyster.net.ck	PRV	PS-S
Owen Trott Manager, Hardware Store Cook Is Trading Corporation Avarua, Rarotonga Phone: 22000, Fax: 20857 Email: shop@citc.co.ck	PRV	PS-S
Don Dorrell Managing Director Cook Is Motor Centre Ltd Panama, Rarotonga Phone: 22055, Fax: 21040 Email: info@motorcentre.co.ck	PRV	PS-S
Winton Pickering Managing Director, Pickering Ltd Avarua, Rarotonga Phone: 29882, Fax: 29884 Email: vehicle@picmotors.co.ck	PRV	PS-S
William Hosking President Rarotonga Nita Growers Association Airport, Rarotonga Phone: 28912, Fax: none Email: info@tikiokirentals.co.ck	AS-F	PS-S
Danny Mataroa President Cook Islands Organic Association Rarotonga Phone: 23956, Fax: 26955 Email: nonimana@oyster.net.ck	AS-F	PS-E TM
MAIN NON-GOVERNMENTAL ORGANISATIONS <i>(in terms of membership; included as requested, though no major role in agriculture sector development)</i>		
Ms Vereara Maeve-Taripo President Cook Islands Association of Non-Governmental Organisations Tupapa, Rarotonga Phone: 29420, Fax: 28420	NGO	TR, LA

Name and contacts	Type	Role
Ms Frances Topa-Apera President National Council of Women Rarotonga Phone: 21467, Fax: 21468	NGO AS-W	TR
Pastor John Tangi Chairman Religious Advisory Council Rarotonga Phone: 24668	CHU	TR
Rev. Tangimetua Tangatutai President Cook Islands Christian Church Takamoa, Rarotonga Phone: 26541, Fax: 26540	CHU	TR

Key

Type

AS-F	Farmers' association (includes co-operatives)
AS-W	Women's association
AS-Y	Youth association
BNK	Bank or credit institution
CCI	Chamber of commerce and industry
CHU	Church-based group
EDU	Educational institution
GOV	Government department / ministry
NGO	Non-government organisation
PRV	Private enterprise, company
REG	Regional organisation, project or network
STA	Statutory body

Role

EX	Extension and outreach
IN	Information services
FS	Financial services
PP	Policy and planning
PS-E	Private sector – exporter (fresh, frozen and dried produce)
PS-M	Private sector – manufacturer (e.g. tannery, bottler, refiner, roaster)
PS-P	Private sector – producer (e.g. commercial farm, fishing company)
PS-S	Private sector – supplier (e.g. ag. Chemicals, equipment, seeds)
RD	Research and development
RG	Regulation (compliance, standards)
TR	Training (at secondary, tertiary and vocational levels)
TM	Trade and marketing (include market development)
IF	Provider of infrastructure, including their maintenance
LA	Provider of additional labour to help out agriculture projects as the need arises
NZGOV	New Zealand Government office

3.2 Key Institutions Involved in Agriculture and Rural Development

3.2.1 Ministry of Agriculture (MoA)

Objective/mission statement	<p>The VISION of the Ministry of Agriculture is to ensure that the highest possible level of benefits from agriculture accrues to the community.</p> <p>The MISSION of the Ministry of Agriculture is to maximise exploitation of the potential in agriculture to advance the economic, social and environmental aspirations of the country in accordance with the principles of comparative advantage, through the application of agricultural technology and high standards of professionalism.</p>
Fields of specialisation	<ul style="list-style-type: none"> • Law enforcement via the enactment of quarantine legislation • Formulation and implementation of policies, programmes and projects in respect of agriculture sector development which includes horticulture and livestock • Information dissemination through crop and livestock extension programmes aimed at yield improvement and quality aspects • Development of import and export protocols for both private and commercial produce
Number of staff	As at the end of January 2004, there were 73 employees, 43 on Rarotonga and 30 in the outer islands. Ninety percent are permanent staff and the rest wage workers.
Branches, other sites	<ul style="list-style-type: none"> • Rarotonga: head office in Arorangi, Research Division and station in Titikaveka, Quarantine Service office in Nikao and a field unit at the wharf. • Outer Islands: all inhabited islands have either an office (all of the southern islands) or only field officers with no proper office; staff works from home, or use the offices of each island administration for communications.
Annual budget	Budget for 2003/04 = NZ\$1,253,510; 80% personnel and the balance operating.
Source of funding, including main donors/sponsors	<ul style="list-style-type: none"> • Government – personnel and operating budget • SPC – technical and financial assistance to approved projects • FAO – technical and financial assistance to approved budgets
Programme/projects undertaken	<p>There on-going programmes and projects in the areas of:</p> <ul style="list-style-type: none"> • crop research and development • fruitfly management • home gardening for household consumption • assistance to schools in their agriculture syllabus • nurseries development including plant propagation • citrus rehabilitation • animal extension and health • CTA-funded project on promoting agricultural

	<p>activities</p> <ul style="list-style-type: none"> • collection and dissemination of agricultural statistics
Target audience	<p>2,753 agricultural households, which is 76% of all households (total of 3,646) in the country. In terms of head count, this equates to 10,564 local residents. This number includes; horticulturists, florists, livestock farmers, fishermen, and their dependents (<i>Ag. Census 2001</i>).</p>
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	<ul style="list-style-type: none"> • National training on organic agriculture (August 2002) – funding assistance • Mass media promotion of agricultural activities (Nov. 03 – October 04) – funding assistance • Stakeholders consultation on operations of CTA (Sept. 02), Netherlands – funding assistance towards participation of one rep (airfares, DSA, accommodation) • Several regional workshops organised by IRETA (with CTA funding) for both staff and farmers in specific areas related to agriculture sector development • Books/publications received from CTA under the DORA programme
Extent of collaboration/interaction with other institutions	<p><i>National</i></p> <p>Rarotonga Nita Growers Association – information supply Development Investment Board – information supply Organic Growers Association – export certification Environment Service – information supply</p> <p><i>Regional</i></p> <p>SPC – information supply, donor support, training, research FAO – information supply, donor support, training, research IRETA – information supply, donor support, training NZMAFF – information supply CTA - information supply, donor support, training</p>
How information needs are currently met, and from where or by whom	<ul style="list-style-type: none"> • SPC – pest control, plant genetic resources and conservation, agroforestry, biosecurity/quarantine • FAO – crop & livestock production, fisheries, forestry, value-adding • Environment Service – information on SPREP/UNEP-funded projects relating to biodiversity and biosafety • NZMAFF – import requirements • Pacific Islands Trade Commission (based in Auckland) – markets and market suppliers, prices ranges
Main information needs not satisfied	<ul style="list-style-type: none"> • Horticulture – seed varieties suitable for the tropics (seeds now being used are temperate types mainly from Yates and Takii which are more suited to the cooler months of the year (May – November) • Livestock – alternative sources of stock feed (the high cost of imported feed is by far the main obstacle to expanding commercial piggery and poultry)

Main problems faced in terms of information and communication management	<ul style="list-style-type: none"> • Availability – information is either not available or not available locally. If not available locally, the reason is that it has not been obtained or sought after. • Frequency – information is either not reaching the farmers on a regular basis, or not getting to them at all. Reasons include; insufficient funds in MoA for out-mailing of printed material received from overseas, lack of trained staff specifically on communications and information management (trained staff have moved on over the years, and competition for manpower from other employers, migration, etc. have prevented qualified communicators to be recruited). • Outdated – sometimes information received is outdated so that they no longer apply, or the latest not-yet-received information may have succeeded the outdated version. • Information not used or used often – there have been cases where information has been despatched to the end-users but never used, a bit like the motor vehicle owners manual where most owners don't bother referring to it, but rather let the trained engineers sort things out whenever something goes wrong or when the service time is due. Information is not being used for the following reasons: lack of understanding, ignorance, or reliance on others such as the Ministry's staff to provide advice.
Why institution selected as key	<ul style="list-style-type: none"> • The main player in facilitating and moving forward the development of agriculture in the country as evidenced from its objective/mission statement, and its fields of specialisation. • The first point of contact for farmers, agricultural marketing agents, general public, travellers, other Government agencies, and sponsors, on any aspect related to horticulture and livestock development, including agriculture legislation.

3.2.2 Rarotonga Nita Growers Association (RNGA)

Objective/mission statement	<p>The VISION of the Rarotonga Nita Growers Association is for the pawpaw industry to achieve the highest level of contribution to the economic development of the agriculture sector of the country.</p> <p>The MISSION of the Rarotonga Nita Growers Association is to maximise revenues to its members through continuous improvements in production levels, quality standards, and expansion in market outlets, while at the same time mindful of the need to maintain the environment.</p>
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Fields of specialisation	Field production and management, harvesting and export; works closely with MoA in these areas.
Number of staff	6 members on the Executive, 30 regular farmer members.
Branches, other sites	Head office is located at the Rarotonga International Airport. The association is operational only on Rarotonga; there are no members in the outer islands.
Annual budget	Not available.
Source of funding, including main donors/sponsors	Main source of funds comes from its financial members in terms of annual fees and deductions for specific purposes. Does not receive any outside funding, but the facility being used by the association is Government owned.
Programme/projects undertaken	<ul style="list-style-type: none"> Field production and management In collaboration with MoA, conduct pawpaw field days and training sessions on crop production and management, especially focusing on pest control and fertiliser application Its corporate arm operates the HTFA treatment plant in collaboration with MoA
Target audience	30 regular growers who, with an average household size of 5, equates to 150 people.
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	<ul style="list-style-type: none"> No direct interaction; may have benefited from inputs by Agriculture staff, especially those who have been to capacity-building programmes organised by IRETA and funded by CTA.
Extent of collaboration/interaction with other institutions	<i>National</i> Ministry of Agriculture – information supply <i>Regional</i> Nil
How information needs are currently met, and from where or by whom	Ministry of Agriculture – technical advice on pest control, soil analysis, fertiliser application, harvesting and post-harvesting treatment
Main information needs not satisfied	<ul style="list-style-type: none"> New seed varieties – current line of seeds have had a lot of inbreeding so that quality has been declining over the last 5-7 years.
Main problems faced in terms of information and communication management	<ul style="list-style-type: none"> Above information is not available locally.
Why institution selected as key	The longest surviving growers association who has been operating for over 25 years, though membership and quantities exported have been on a gradual decline.

3.2.3 Ministry of Marine Resources

Objective/mission statement	Recognising the potential growth of the long line commercial fishing and aquaculture industries including the pearl industry, continued support will be provided through an environment of fiscal incentives and user-friendly regulatory regime to promote local business participation.
Field of specialisation	<ul style="list-style-type: none"> • Inshore fisheries and aquaculture development • Licensing and monitoring of foreign fishing vessels operating in Cook Islands EEZ • Development of marine management plans • Administer and negotiate treaties and bilateral agreements in respect of fisheries and marine resources development on behalf of the Cook Islands • Installation and maintenance of fish aggregate devices (FADs)
Number of staff	44, spread over 9 islands.
Branches, other sites	<ul style="list-style-type: none"> • Rarotonga: head office in Avarua • Hatcheries in Penrhyn and Aitutaki • Staff on all islands except Mauke, Mitiaro and Mangaia
Annual budget	Budget for 2003/04 = NZ\$1,153,000, 69% on personnel and 31% on operating.
Source of funding, including main donors/sponsors	<ul style="list-style-type: none"> • Government – personnel and operating budget • SPC – technical and financial assistance to approved projects • FFA – technical and financial assistance to approved budgets • SOPAC – technical and financial assistance to approved projects, manpower training • NZAID – technical and financial assistance
Programme/projects undertaken	<ul style="list-style-type: none"> • Development of a marine resources master plan • Review of the marine resources act 1989 • Administer and negotiate treaties and bilateral agreements on behalf of the Cook Islands • Expansion of pearl farming to new lagoons • Provision of technical support and liaison to Island Councils • Information collection for the development of policy guidelines on the sustainable growth of the pearl industry • Coordinate pearl seeding and grading training • Maintenance of pearl, trochus and giant clam hatcheries • Maintenance of existing fish aggregating devices (FADs) and installation of new ones • Research to determine commercial harvest quotas of inshore species • Coordinate local/regional training programmes in relation to the commercial fishing industry

	<ul style="list-style-type: none"> Monitoring of the recording of catch data reports by fishing vessels
Target audience	<ul style="list-style-type: none"> Commercial fishing license holders; 35 meantime Local fishermen and their families; approximately 25% of the local resident population Markets in Japan, Europe and the US
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	<ul style="list-style-type: none"> None
Extent of collaboration/interaction with other institutions	<p><i>National</i> Environment Service – information supply Health – information supply, field surveys, seawater testing Agriculture – codex alimentarius</p> <p><i>Regional</i> FFA – information supply, donor support, training SPC – information supply, donor support, training SOPAC – information supply, donor support, training, research NZAID – donor support FAO – donor support</p>
How information needs are currently met, and from where or by whom	<ul style="list-style-type: none"> FFA SPC SOPAC NZAID FAO
Main information needs not satisfied	Needs are satisfied from existing contacts
Main problems faced in terms of information and communication management	Apart from the infrequent delays in information getting through, not much problems are faced.
Why institution selected as key	The main player in facilitating and moving forward the development of marine resources in the country as evidenced from its objective/mission statement, and its fields of specialisation.

3.2.4 **Secretariat of the Pacific Community – Plant Protection Service (SPC/PPS)**

Objective/mission statement	Not available
Field of specialisation	<ul style="list-style-type: none"> Plant protection – pest management, biosecurity, plant genetic resources Animal health – animal quarantine, animal disease surveys, paravet training Forestry – management
Number of staff	Not available

Branches, other sites	SPC head office is in Noumea, New Caledonia; Land Resources Division which includes horticulture, livestock, forestry and fisheries, is located in Suva, Fiji.
Annual budget	Not available
Source of funding, including main donors/sponsors	All SPC-member countries have fixed rates to contribute to the main budget, e.g. Cook Islands contributes NZ\$30,000/annum.
Programme/projects undertaken	Several programmes have been implemented in the country over the last 25 years, mainly on crop production but also includes livestock and forestry. Examples include; <ul style="list-style-type: none"> 3 Management of the coconut flat moth, orchid weevil and Queensland fruitfly 3 Materials and supplies for the research station laboratory 3 International consultancies in selected areas of horticulture, livestock and forestry 3 Several international/regional manpower training programmes for staff in all disciplines
Target audience	<ul style="list-style-type: none"> • MoA staff • Farmers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	No idea; not available.
Extent of collaboration/interaction with other institutions	No idea; not available.
How information needs are currently met, and from where or by whom	No idea; not available.
Main information needs not satisfied	No idea; not available.
Main problems faced in terms of information and communication management	No idea; not available.
Why institution selected as key	SPC has been a driving force for agriculture sector development in the country since it became a member of the organisation in 1975. Assistance in all forms have been kindly provided to enhance efforts by both farmers and MoA in agriculture sector development. SPC, together with FAO and IRETA, will certainly continue to be the key development partners in the future.

3.2.5 Food & Agriculture Organisation of the United Nations (FAO)

Objective/mission statement	Not available
Field of specialisation	Horticulture, livestock, fisheries, forestry
Number of staff	Not available
Branches, other sites	Sub-regional branch in Apia, Samoa whom MoA communicates on all FAO-funded programmes and projects
Annual budget	Not available
Source of funding, including main donors/sponsors	All FAO-member countries have fixed rates to contribute to the main budget, e.g. Cook Islands contributes NZ\$15,000/annum
Programme/projects undertaken	<p>Several programmes have been implemented in the country over the last 25 years, mainly on crop production but also includes livestock and forestry. Examples include;</p> <ul style="list-style-type: none"> 3 Construction of the Ngatangiia Abattoir, the only one in the country 3 2 Agriculture Censuses (1988, 2000) 3 Meat processing 3 Goat breeding 3 Telefood projects (up to US\$10,000) for the NGOs and communities of which about 20 has been approved and implemented 3 Several international/regional manpower training programmes for staff in all disciplines
Target audience	<ul style="list-style-type: none"> • MoA staff • Small and disadvantaged farmers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	No idea; not available.
Extent of collaboration/interaction with other institutions	No idea; not available.
How information needs are currently met, and from where or by whom	No idea; not available.
Main information needs not satisfied	No idea; not available.
Main problems faced in terms of information and communication management	No idea; not available.
Why institution selected as key	FAO has been a driving force for agriculture sector development in the country since it became a member of the organisation in 1982. Assistance in all forms

	have been kindly provided to enhance efforts by both farmers and MoA in agriculture sector development. FAO, together with SPC and IRETA, will certainly continue to be key development partners in the future.
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3.2.6 The Institute for Research, Extension and Training in Agriculture (IRETA)

Objective/mission statement	IRETA contributes to sustainable growth and development of South Pacific countries by responding to their needs for research, information and training in the broad fields of agriculture and rural development.
Field of specialisation	Training (meetings, seminars, workshops, field study visits) and information dissemination.
Number of staff	12, including the Director
Branches, other sites	IRETA is a branch of USP. It maintains a network of staff employed by the national Ministries of Agriculture (ALO) who meets annually concerning its work programme.
Annual budget	Not available
Source of funding, including main donors/sponsors	<ul style="list-style-type: none"> • USP core budget • Other donors of which CTA is the main contributor
Programme/projects undertaken	IRETA implements its activities under 4 key areas; Printing Activities, Information and Networking, Capacity Development, and Video Production. All USP member countries benefit from programmes under these 4 groupings.
Target audience	<ul style="list-style-type: none"> • MoA staff • Farmers and rural workers
Extent of interaction with CTA – SDI, QAS, DORA, seminars, consultants, publications	A lot; CTA is the main funding agency apart from its core USP budget.
Extent of collaboration/interaction with other institutions	A lot (FAO, SPC/PPS, NZAID, AusAid, etc.).
How information needs are currently met, and from where or by whom	<ul style="list-style-type: none"> • Subscription to publications of development partners, e.g. SPC, FAO, CTA, NZAID, AusAid • Personal communications with contacts in the above and other organisations
Main information needs not satisfied	With IRETA's well established networks with its development partners, information can be promptly obtained if it is not already within IRETA.
Main problems faced in terms of information and communication management	A crucial problem is getting and retaining the right calibre of staff.
Why institution selected as key	IRETA has been a driving force for agriculture sector development in the country since it became a member

	of the organisation in the 1980s. Assistance in all forms, mainly capacity development, have been kindly provided to enhance efforts by both farmers and MoA in agriculture sector development. IRETA, together with SPC and FAO, will certainly continue to be key development partners in the future.
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Note: no interviews were conducted with FAO, SPC and IRETA officials; they don't have offices in the Cook Islands. Comments above come from the author's long association with the three organisations and with the available records in MoA. They were nevertheless selected as key players because of the nature and extent of their involvement in agriculture sector development in the Cook Islands in collaboration with MoA over many years.

ANNEX 4: PERSONS CONTACTED

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Awaiki M. Aperau	Field Service Supervisor P.O. Box 96, Rarotonga, Cook Islands Phone: +682-28711, Fax: 21881, Email: cimoa@oyster.net.ck
Sabati N. Solomona	Former ALO and former Director of Planning, MoA Currently Secretary, Aitutaki Island Administration Phone: +682-31007, Fax: 31986
Anau Manarangi	Technical Adviser to the Rarotonga Nita Growers Association, also former Director of Research & Extension, MoA; full-time farmer Nikao, Rarotonga, Cook Islands Phone: +682-26140
Ian Bertram	Secretary, Ministry of Marine Resources P.O. Box 85, Rarotonga, Cook Islands Phone: +682-28721, Fax: 29721, Email: mmr@oyster.net.ck
Joshua Mitchell	Director, Policy & Planning, Ministry of Marine Resources P.O. Box 85, Rarotonga, Cook Islands Phone: +682-28721, Fax: 29721, Email: mmr@oyster.net.ck
Otheniel Tangianau	Former Chief Forestry Officer in MoA Adviser, Office of the Minister for Island Administration P.O. Box 383, Rarotonga, Cook Islands Phone: +682-20321, Fax: 24321, Email: omia@oyster.net.ck
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ANNEX 5: LIST OF ABBREVIATIONS

ACP	African, Caribbean and Pacific countries
BQA	Bilateral quarantine agreement
CITC	Cook Islands Trading Corporation
COGENT	Coconut Genetic Resources Network
CTA	Technical Centre for Agricultural & Rural Co-operation
DSA	Daily subsistence allowance
EEZ	Exclusive Economic Zone
EM	Environmentally modified
ERP	Economic Restructuring Programme
FFA	Forum Fisheries Agency
FA	Food & Agriculture Organisation of the United Nations
FAD	Fish aggregate device
GDP	Gross Domestic Product
GMO	Genetically modified organism
HTFA	Hot Temperature Forced Air
ICM	Information & Communication Management
ICT	Information Communications Technology
IPM	Integrated Pest Management
IRETA	Institute for Research, Extension & Training in Agriculture, a division of USP
MoA	Cook Islands Ministry of Agriculture
MMR	Cook Islands Ministry of Marine Resources
NFP	National Forest Policy
NGO	Non-governmental Organisation
NZ	New Zealand
NZAID	New Zealand Agency for International Development
NZMAFF	New Zealand Ministry of Agriculture & Forestry
PACER	Pacific Area Closer Economic Relations
P&CS	Planning & Corporate Services, a division of CTA
PGRFP	Pacific German Regional Forestry Project
PICTA	Pacific Island Countries Trade Agreement
RBM	Regional Board of Management, an executive body comprising the Directors of Agriculture in the region which oversees IRETA's activities
SOPAC	South Pacific Geosciences Commission
SPC	Secretariat of the Pacific Community
SPREP	South Pacific Regional Environment Programme
TAROGEN	Taro Genetic Resources Network
UNEP	United Nations Environment Programme
USP	University of the South Pacific
